



CITY OF BATTLE CREEK

COMMUNITY SERVICES DEPARTMENT – PLANNING AND ZONING

AGENDA

Historic District Commission Meeting

Date: Monday, August 9 2021

Time: 4:00 P.M.

Via: ZOOM Virtual Meeting

1. Call to Order:
2. Attendance:
3. Additions or Deletions to Agenda:
4. Approval of minutes: July 12, 2021
5. Correspondence:
6. Old Business:
7. New Business:
 - A. H-12-21, Climax Solar, 1604 W. Milham Ave., Portage, MI for a Certificate of Appropriateness for a roof mounted solar array at 28 Hanover Street Parcel# 0660-00-024-0.
 - B. H-13-21, X-tream Roofing, LLC, 371 Upton Avenue, Battle Creek, MI for a Certificate of Appropriateness for a new roof at 181 W. Emmett Street Grace Health. Parcel #0601-25-385-0.
 - C. H-14-21 Calhoun County Land Bank Authority, 315 W. Green Street for a Notice to Proceed for demolition and removal of a collapsed roof and front porch of a duplex at 68/70 Frelinghuysen Avenue. Parcel # 5370-00-205-0.
8. Comments by the Public:
9. Comments from Commission members and Staff:
10. Adjournment:

The City of Battle Creek will provide necessary reasonable auxiliary aids and services, such as signers for the hearing impaired and audio tapes of printed materials being considered in the meeting upon notice to the City of Battle Creek. Individuals with disabilities requiring auxiliary aides or services should contact the City of Battle Creek by writing or calling the following: Office of the City Clerk, P.O. Box 1717, 10 North Division – Suite 111, Battle Creek, MI 49016, (269)966-3348 (Voice), (269)966-3348 (TDD) [Division Site](#)

CITY OF BATTLE CREEK
HISTORIC DISTRICT COMMISSION
Special Meeting
Zoom Virtual Meeting
10 North Division, Battle Creek, MI 49014
Minutes for Monday, July 19, 2021

Meeting called to order by Chairperson Newman at 4:02 p.m. This meeting was held virtually via Zoom Virtual Meeting.

Chair Newman asked that attendance be noted. A roll call was taken:

Comm. Newman, present, Battle Creek, MI
Comm. Simpson, present, Battle Creek, MI
Comm. Reid, present, Battle Creek, MI
Comm. Drozdowski, present, Battle Creek, MI
Comm. Blonde, present, Battle Creek, MI

Absent: Comm. Chubinski, Comm. Sallee, Vice Mayor Faris

Staff Present: Eric Feldt, Planning Coordinator, Marcie Gillette, Community Services Director, Michele D. Sutherland, Customer Service Rep II; and Marcel Stoetzel, Deputy City Attorney.

Announcement: None.

Public Comments: None.

Approval of the Minutes for the June 12, 2021 meeting: Motion made by Comm. Drozdowski seconded by Comm. Blonde. **ALL IN FAVOR, MOTION APPROVED.**

A roll call was taken:

Comm. Newman, yes
Comm. Reid, yes
Comm. Drozdowski, yes
Comm. Blonde, yes

Comm. Simpson, did not vote

OLD BUSINESS: None.

NEW BUSINESS:

A: H-10-21: AEDEN CO. LLC, Donald McClellan, 128 Park Place, Battle Creek. Request for a Certificate of Appropriateness for the rehabilitation of 238 Capital Ave. N.E., Battle Creek, MI.

Staff Presentation: Presentation given by Eric Feldt. Staff recommends approval of H-10-21 as outlined in the staff report.

Applicant Presentation: Donald McLellan, 128 Park Place, states the original lead glass windows will be installed into aluminum frames and rehung.

Public Comments: None.

HDC Discussion:

Comm. Drozdowski states it is a beautiful home and she is glad it is being restored to its former glory.

A MOTION WAS MADE BY COMMISSIONER BLONDE AND SUPPORTED BY COMMISSIONER DROZDOWSKI TO APPROVE H-10-21. A VOTE WAS TAKEN 4-0, MOTION APPROVED.

A roll call was taken:

Comm. Newman, yes
Comm. Reid, yes
Comm. Drozdowski, yes
Comm. Blonde, yes

Comm. Simpson did not vote.

B: H-11-21, Driven Design, 117 West Michigan Avenue for a Certificate of Appropriateness for an outdoor restaurant patio at 215 W. Michigan Ave., Umami Ramen.

Cody Newman recused himself, as he is the architect on the project.

Staff Presentation: Presentation given by Eric Feldt, Staff recommends approval of H-11-21 as outlined in the staff report.

Applicant Presentation: Cody Newman, Driven Design states they were given prior approval for the patio however revised the plans to include fencing and only one patio cover.

A MOTION WAS MADE BY COMM. BLONDE TO APPROVE H-11-21, A CERTIFICATE OF APPROPRIATENESS FOR A NEW PATIO COVER. SECONDED BY COMM. DROZDOWSKI. A VOTE WAS TAKEN 4-0, MOTION APPROVED.

Without further discussion a roll call vote was taken:

Comm. Simpson, yes
Comm. Reid, yes
Comm. Drozdowski, yes
Comm. Blonde, yes

Comm. Newman recused himself.

PUBLIC COMMENTS: None.

COMMENTS FROM COMMISSION STAFF: None.

COMMENTS FROM COMMISSION MEMBERS: None.

ADJOURNMENT:

Chairperson Newman adjourned the meeting at 4:37 p.m.

Submitted by: Michele D. Sutherland, CSR II, Planning and Zoning



Battle Creek Historic District Commission

Staff Report

28 Hanover Street

Meeting: August 9, 2021
Case No. H-12-21

To: Historic District Commission

From: Eric Feldt, Planning/ Zoning Coordinator, AICP, CFM

Date: July 27, 2021

Subject: The petition, filed by Climax Solar, is for the issuance of a Certificate of Appropriateness for new roof top solar array structures at 28 Hanover Street pursuant to Zoning and Historic District Commission requirements.

Summary

The homeowner wishes to install new roof top solar array structures (panels) on the subject garage and house to provide renewable energy for use. The applicant filed the subject HDC Certificate of Appropriateness because the subject property (28 Hanover Street) is located in the Old Advent Town historic district. Staff recommends approval of the project because the project meets the standards outlined in Chapter 1470.09 "Review of Applications", Chapter 1470.17 "Preservation of Historic Features" and the Secretary of the Interior's Standards and Guidelines.



Figure 1. Map of the neighborhood showing the subject site (28 Hanover Street). Aerial photograph provided by City of Battle Creek, dated April 2020 (approx.).

Site & History

The subject site is located at 28 Hanover Street, south of Walter Avenue and a few blocks west of Irving Park. It is also in the Old Advent Town local historic district. According to the City's Assessor's records, the subject site consists of 0.24 acres (10,715 square feet) in size and is developed with a two-story single-family house built in 1999 and a detached garage built in 2001. The house appears to consist of vinyl siding with a unique pattern near the peak of the roof; an open front porch with hand railings, non-descript support columns, and a front-facing door; and, a symmetrical roof line along the north and south elevations that repeats the façade roof shape and pattern. Present-day pictures of the site are provided in Figures 2 & 3. Despite the relatively young age of the house compared to the historic homes within the neighborhood, it does present some historic qualities and appears compatible with adjacent homes. Staff notes that the roof of the house and garage both consist of a modern asphalt, dimensional shingle design and material.



Figures 2 & 3 [L-R]: Red arrows point to two of three locations of proposed solar array; third location not visible from street. Pictures taken 7.22.21 and provided by City staff.

Project Description

Since the site is located in a local historic district and some of the proposed roof top solar array structures will be visible from Hanover Street, the applicant filed the subject HDC Certificate of Appropriateness (No. H-12-21). Three roof top solar array structures are proposed: one on the garage, and two on the house. See attached plans for location and structure design. These structures consists of flat panels that mount several inches above the roof; each panel surface containing photovoltaic cells that capture and convert sunlight to energy (generally). The panels are designed to be parallel with the roof pitch thereto attached. All three solar arrays are on the south side of the roofs, intentionally angled to receive full sun light for solar array capture. The specific solar array locations can be seen attachment Sheet A-103.00.

The solar panels proposed on the garage (Figure 2) will not be easily visible from Hanover Street due to the garage's distant location from the street and the general difficulty of seeing the south side roof surface. The southeastern-proposed solar array on the house roof will also not be visible from the street due to the various roof pitches obscuring its view. However, the southwestern-proposed solar array

(Figure 3) on the house will be visible from the street but not very conspicuous due to the upward side angle of the roof and second-story elevation. Present-day pictures of the house and garage are provided in Figures 2 & 3.

Analysis

Due to the location and design of the proposed solar panels, staff finds that the panels will not result in a prominent appearance of the overall garage or house. As mentioned earlier, the roof of both buildings consist of a modern dimensional shingle design and material, and thus, do not consist of historic significance. Further, the panels will be installed and designed a few inches above the roof surface and parallel with the roof slope thereto attached and, therefore, have an accessory functionality.

Applicable HDC Guidelines and Analysis for a Certificate of Appropriateness to install new roof top solar array structures at 28 Hanover Street.

This property is reviewed in accordance with City of Battle Creek Building and Housing Code Chapter 1470 "Historic Preservation", as amended, the Michigan's Local Historic Districts Act, as amended, and the criteria for the National Register of Historic Places as outlined in the Secretary of the Interior's Standards and Guidelines.

Specifically, the Commission shall follow Section 1470.09 *Review of Applications*, as follows:

- (b) *The Commission shall also consider all of the following:*
 - (1) *The historic or architectural value and significance of the resource and its relationship to the historic value of the surrounding area.*
 - (2) *The relationship of any architectural features of the resource to the rest of the resource and the surrounding area.*
 - (3) *The general compatibility of the design, arrangement, texture, and materials proposed to be used.*
 - (4) *Other factors, such as aesthetic value that the Commission finds relevant.*
- (c) *The Historic District Commission shall review and act upon only exterior features of a resource and shall not review and act upon interior arrangements...*

And

1470.17 PRESERVATION OF HISTORIC FEATURES.

- (a) *Every reasonable effort shall be made to provide a compatible use for a resource which requires minimal alteration of the building, structure or site and its environment, or to use the resource for its originally intended purpose.*

Staff finds that the solar array structures will not change the use nor intended purposes of the existing garage or house. Further, staff finds that the proposed structures results in minimal alteration to the house and garage.

- (b) *The distinguishing original qualities or character of a resource and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features shall be avoided when possible.*

The distinguishing original qualities or character of the existing house and garage will not be destroyed by the solar array structures because these structures will not result in modifying either building, will be designed close to the surface of the roof, and will be located in a way that is not highly visible from the street or sidewalk. The project will not remove nor alter the house or garage.

- (c) *All resources shall be recognized as products of their own time. Alterations that have no historic basis and which seek to create an earlier appearance shall be discouraged.*

The project will not create alterations resulting in an earlier appearance.

- (d) *Changes which may have taken place in the course of time are evidence of the history and development of a resource and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.*

This criteria is not relevant to the project because no changes to the exterior have taken place which may have acquired significance in their own right.

- (e) *Distinctive stylistic features or examples of skilled craftsmanship which characterize a resource shall be treated with sensitivity.*

As stated earlier, the roof of the house and garage consists of a contemporary design and material. Staff does not find the roofs to have distinctive stylistic features or specific skilled craftsmanship. Therefore, this criteria is not relevant to the project.

- (f) *Deteriorated architectural features shall be repaired rather than replaced wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other resources.*

This criteria is not relevant because the proposal does not entail any repairs or replacements.

- (g) *The surface cleaning of resources shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic materials shall not be undertaken.*

Intensive cleaning application such as sand blasting will not be necessary for the project.

- (h) *Every reasonable effort shall be made to protect and preserve archaeological resources affected by or adjacent to any project.*

This criteria primarily applies to projects involving any type of ground work. No ground work is proposed under the subject project.

- (i) *Contemporary design for alterations and additions to existing resources shall not be discouraged when such alterations and additions do not destroy significant historic, architectural or cultural material and when such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment.*

This criteria is not relevant to the project since it does not entail any alterations or additions to the site.

- (j) *Whenever possible, new additions or alterations to resources shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the resource would not be unimpaired.*

The new roof top solar array structures can be removed in the future without negatively affecting the essential form or integrity of the house or garage.

Recommendation

The new roof top solar array structures provide renewable energy for use by the homeowner. Based on staff's analysis of the application and site conditions, the proposal does comply with all standards outlined in Chapter 1470 *Historic Preservation* and should be approved. As contained herein, staff finds that the Commission does not find any conflict with Chapter 1470 *Historic Preservation*, the Michigan Local Historic Districts Act, or the Secretary of the Interior's Standards and Guidelines.

Therefore, planning staff recommends approval of a Certificate of Appropriateness for new roof top solar array structures at 28 Hanover Street, as the request meets the standards outlined in Chapter 1470.09 "Review of Applications", Chapter 1470.17 "Preservation of Historic Features" and the Secretary of the Interior's Standards and Guidelines, as outlined in the staff report.



City of Battle Creek

Department of Planning and Community Development
10 N. Division Street, Ste. 117 • Battle Creek, Michigan 49014
Phone: (269) 966-3320 • www.battlecreekmi.gov

HISTORIC DISTRICT COMMISSION

Application for:

- ☒ Certificate of Appropriateness (for repairs or rehab projects)
☐ Notice to Proceed (for demolition requests)
☐ Minor Class of Work (admin approval)

Petition No. _____

Date Received: _____

APPLICANT**

NAME: Climax Solar
ADDRESS: 1604 W. Milham Ave, Portage, MI, 49024
PHONE: 269-746-2000 FAX: _____
EMAIL: Installations@ClimaxSolar.com

OWNER (if different from applicant)

NAME: Kevin Jones
ADDRESS: 28 Hanover St, Battle Creek, MI, 49015
PHONE: 269-967-5978 FAX: _____
EMAIL: jrshoesbc@gmail.com

**If the applicant is not the property owner, a letter signed by the owner agreeing to the application to the Historic District Commission must be included with the application.

SUBMITTAL REQUIREMENTS/EXISTING CONDITIONS

Address(es) of property for which the request is being sought: 28 Hanover St.

Current use of the property: Home

List existing structures on the property and the approximate age of each. Home

Built in 2001.

Please list all activities/proposed work for the property area and how the proposed work relates to the building as a whole.

Solar array on roof.

Indicate in which manner the proposed work will result in changes to the size and/or appearance of the features outlined in this application.

Roof Mounted solar array, on roof

Does the work proposed include maintenance/repair of existing features of the structure, or will it create new features that do not currently exist?

Solar addition on roof

Please indicate the existing building materials of the following structural features and the proposed materials if that feature is included as part of the application.

	Existing Materials	Proposed Materials (if applicable)
Roof	Same as current	Solar Panels
Windows		
Siding		
Foundation		
Other		

For Notice To Proceed requests only:

What options have you explored for the repair or relocation of the structure proposed for demolition?

SUBMITTAL REQUIREMENTS

As outlined in "HDC, Information and Procedure", each request requires supplementary items that thoroughly describe the existing structure and proposed project. These items are to be submitted with the completed application; incomplete applications will not be forwarded to the Historic District Commission.

APPLICANT SIGNATURE

By signing this application, the applicant hereby declares that all answers given herein are true to the best of their knowledge, and confirms that all information required for Historic District Commission review has been submitted. Furthermore, the applicant confirms that they have thoroughly read the "Historic District Commission, Information and Procedures" and agrees to comply with all requirements and procedures outlined therein.

Will Lan Culp
Name

7-15-21
Date

GENERAL NOTES

- 1.1.1 PROJECT NOTES:
- 1.1.2 THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC) ARTICLE 690, ALL MANUFACTURER'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION (AHJ) APPLICABLE CODES.
- 1.1.3 THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION.
- 1.1.4 GROUND FAULT DETECTION AND INTERRUPTION (GFD) DEVICE IS INTEGRATED WITH THE MICROINVERTER IN ACCORDANCE WITH NEC 690.41(B).
- 1.1.5 ALL PV SYSTEM COMPONENTS: MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY NEC 690.4. PV MODULES, UL 1703, IEC61713, AND IEC61215, AND MPPT TO CLASS C FIRE INVERTERS: UL 1741 CERTIFIED, IEEE 1547, IEEE 929, 929.119 COMBINER BOXES: UL 1703 OR UL 1741 ACCESSORY.
- 1.1.6 MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC. IF UNAVAILABLE, MAX DC VOLTAGE CALCULATED ACCORDING TO NEC 690.7.
- 1.1.7 ALL INVERTERS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER 690.4 (B). SHALL BE INSTALLED ACCORDING TO ANY INSTRUCTIONS FROM LISTING OR LABELING [NEC 110.3].
- 1.1.8 ALL SIGAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLACES AND SIGAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- 1.2.1 SCOPE OF WORK:
- 1.2.2 PRIME CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SPECIFICATIONS OF THE GRID-TIED PHOTOVOLTAIC SYSTEM RETROFIT. PRIME CONTRACTOR WILL BE RESPONSIBLE FOR COLLECTING EXISTING ON-SITE REQUIREMENTS TO DESIGN, SPECIFY, AND INSTALL THE EXTERIOR ROOF-MOUNTED PORTION OF THE PHOTOVOLTAIC SYSTEMS DETAILED IN THIS DOCUMENT.
- 1.3.1 WORK INCLUDES:
- 1.3.2 PV ROOF ATTACHMENTS - IRON/ROOF FLASH/FOOTZ
- 1.3.3 PV RACK/SYSTEM INSTALLATION - IRON/ROOF RACK/FOOTZ
- 1.3.4 PV MODULE AND INVERTER INSTALLATION - LG ELECTRONICS LG540N1K/VS
- 1.3.5 PV EQUIPMENT GROUNDING
- 1.3.6 PV SYSTEM WIRING TO A ROOF-MOUNTED JUNCTION BOX
- 1.3.7 PV LOAD CENTERS (IF INCLUDED)
- 1.3.8 PV METERING/MONITORING (IF INCLUDED)
- 1.3.9 PV DISCONNECTS
- 1.3.10 PV GROUNDING ELECTRODE & BONDING TO (E) GED
- 1.3.11 PV FINAL COMMISSIONING
- 1.3.12 (E) ELECTRICAL EQUIPMENT RETROFIT FOR PV
- 1.3.13 SIGAGE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE

SCOPE OF WORK
SYSTEM SIZE: STC: 16 X 340W = 5.440KW
PTC: 16 X 313W = 5.008KW
(16) LG ELECTRONICS LG540N1K/VS
(16) BIPHASE 10PLUS72-2US

ATTACHMENT TYPE: IRON/ROOF FLASH/FOOTZ
MSP UPGRADE: NO

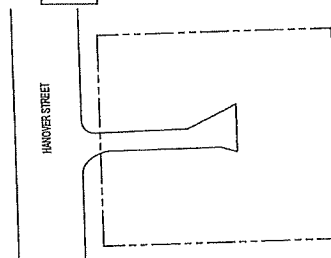
NEW PV SYSTEM: 5.440 kWp

JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
ASSESSOR'S #: 520660000240



01 AERIAL PHOTO
NOT TO SCALE



02 PLAT MAP
NOT TO SCALE



SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
T-001	COVER PAGE
G-001	NOTES
A-101	SITE PLAN
A-102	ELECTRICAL PLAN
A-103	SOLAR ATTACHMENT PLAN
S-501	ASSEMBLY DETAILS
S-502	ASSEMBLY DETAILS
E-601	WIRE DIAGRAM
E-602	DESIGN TABLES
E-603	PLACARDS
R-001	RESOURCE DOCUMENT
R-002	RESOURCE DOCUMENT
R-003	RESOURCE DOCUMENT
R-004	RESOURCE DOCUMENT
R-005	RESOURCE DOCUMENT
R-006	RESOURCE DOCUMENT

PROJECT INFORMATION

OWNER: KEVIN JONES
NAME: KEVIN JONES
PHONE: 269-745-2000

PROJECT MANAGER: KEVIN JONES
NAME: KEVIN JONES
PHONE: 269-745-2000

CONTRACTOR: CLIVAX SOLAR | PLATINUM LG PARTNER
NAME: CLIVAX SOLAR | PLATINUM LG PARTNER
PHONE: 269-745-2000

AUTHORITIES HAVING JURISDICTION:
BUILDING: BATTLE CREEK
ZONING: BATTLE CREEK
UTILITY: CONSUMERS ENERGY CO - RESIDENTIAL

DESIGN SPECIFICATIONS:
OCCUPANCY: II
CONSTRUCTION: SINGLE-FAMILY
ZONING: RESIDENTIAL
GROUND SNOW/LOAD: 30 PSF
WIND EXPOSURE: B
WIND SPEED: 115 MPH

APPLICABLE CODES & STANDARDS:
BUILDING: IRC 2015, IRC 2015
ELECTRICAL: NEC 2017
FIRE: MFC 2015



CONTRACTOR

CLIVAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-745-2000
ADDRESS: 1004 WILKHAM AVE,
PORTAGE, MI 49024

LIC. NO.: 210113753
REC. NO.:
ELE. NO.: 8218163
UNAUTHORIZED USE OF THE
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF U.S. COPYRIGHT LAW
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 5.440 kWp

JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

COVER PAGE



DATE: 08.30.2021
DESIGN BY: V.S.
CHECKED BY: MJL
REVISIONS

T-001.00
(SHEET 1)

A	B	C	D	E	F	G	H
2.1.1	SITE NOTES:			4.5.1	GROUNDING NOTES:		
2.1.2	A LADDER WILL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS			2.5.2	GROUNDING SYSTEM COMPONENTS SHALL BE LISTED FOR THEIR PURPOSE, AND GROUNDING DEVICES EXPOSED TO THE ELEMENTS SHALL BE RATED FOR SUCH USE.		
2.1.3	THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.			2.5.3	PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO CEC 690.43 AND MINIMUM CEC TABLE 250.122.		
2.1.4	THE SOLAR PV INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.			2.5.4	METAL PARTS OF MODULE FRAMES, MODULE RACKING, AND ENCLOSURES CONSIDERED GROUNDED IN ACCORD WITH 250.134 AND 250.150(A).		
2.1.5	PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION CEC 110.28.			2.5.5	EQUIPMENT GROUNDING CONDUCTORS SHALL BE SIZED ACCORDING TO CEC 690.45 AND MICROINVERTER MANUFACTURERS' INSTRUCTIONS.		
2.1.6	ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THIS CODE AND THE APPROVED MANUFACTURERS' INSTRUCTIONS SUCH THAT THE ROOF COVERING SERVES TO PROTECT THE BUILDING OR STRUCTURE.			2.5.6	EACH MODULE WILL BE GROUNDED USING WEEB GROUNDING CLIPS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ. IF WEEBS ARE NOT USED, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE SPECIFIED GROUNDING LUG HOLES PER THE MANUFACTURERS' INSTALLATION REQUIREMENTS.		
2.2.1	EQUIPMENT LOCATIONS:			2.5.7	THE GROUNDING CONNECTION TO A MODULE SHALL BE ARRANGED SUCH THAT THE REMOVAL OF A MODULE DOES NOT INTERRUPT A GROUNDING CONDUCTOR TO ANOTHER MODULE.		
2.2.2	ALL EQUIPMENT SHALL MEET MINIMUM SETBACKS AS REQUIRED BY CEC 110.28.			2.5.8	GROUNDING AND BONDING CONDUCTORS, IF INSULATED, SHALL BE COLORED GREEN OR MARKED GREEN IF #4 AWG OR LARGER [CEC 250.116].		
2.2.3	WIRING SYSTEMS INSTALLED IN DIRECT SUNLIGHT MUST BE RATED FOR EXPECTED OPERATING TEMPERATURE AS SPECIFIED BY CEC 690.31 (A),(C) AND CEC TABLES 310.15 (B)(2)(A) AND 310.15 (B)(3)(C).			2.5.9	THE GROUNDING ELECTRODE SYSTEM COMPLIES WITH CEC 690.47 AND CEC 250.50 THROUGH 250.106. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, A GROUNDING ELECTRODE SYSTEM PROVIDED ACCORDING TO CEC 250, CEC 690.47 AND AHJ.		
2.2.4	JUNCTION AND PULL BOXES PERMITTED INSTALLED UNDER PV MODULES ACCORDING TO CEC 690.34.			2.5.10	GROUND-FAULT DETECTION SHALL COMPLY WITH CEC 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS.		
2.2.5	ADDITIONAL AC DISCONNECT(S) SHALL BE PROVIDED WHERE THE INVERTER IS NOT WITHIN SIGHT OF THE AC SERVING DISCONNECT.			2.6.1	DISCONNECT AND OVER-CURRENT PROTECTION NOTES:		
2.2.6	ALL EQUIPMENT SHALL BE INSTALLED ACCESSIBLE TO QUALIFIED PERSONNEL ACCORDING TO CEC APPLICABLE CODES.			2.6.2	DISCONNECTING SWITCHES SHALL BE WAIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING ENERGIZED ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS).		
2.2.7	ALL COMPONENTS ARE LISTED FOR THEIR PURPOSE AND RATED FOR OUTDOOR USAGE WHEN APPROPRIATE.			2.6.3	DISCONNECTS TO BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.		
2.3.1	STRUCTURAL NOTES:			2.6.4	PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).		
2.3.2	RACKING SYSTEM & PV ARRAY WILL BE INSTALLED ACCORDING TO CODE-COMPLIANT INSTALLATION MANUAL. TOP CLAMPS REQUIRE A DESIGNATED SPACE BETWEEN MODULES, AND RAILS MUST ALSO EXTEND A MINIMUM DISTANCE BEYOND EITHER EDGE OF THE ARRAY/SUBARRAY, ACCORDING TO RAIL MANUFACTURER'S INSTRUCTIONS.			2.6.5	ALL OCPD RATINGS AND TYPES SPECIFIED ACCORDING TO CEC 690.8, 690.9, AND 240.		
2.3.3	JUNCTION BOX WILL BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS. IF ROOF-PENETRATING TYPE, IT SHALL BE FLASHED & SEALED PER LOCAL REQUIREMENTS.			2.6.6	MICROINVERTER BRANCHES CONNECTED TO A SINGLE BREAKER OR GROUPED FUSES IN ACCORDANCE WITH CEC 110.3(B).		
2.3.4	ROOFTOP PENETRATIONS FOR PV RACEWAY WILL BE COMPLETED AND SEALED W/ APPROVED CHEMICAL SEALANT PER CODE BY A LICENSED CONTRACTOR.			2.6.7	IF REQUIRED BY AHJ, SYSTEM WILL INCLUDE ARC-FAULT CIRCUIT PROTECTION ACCORDING TO CEC 690.11 AND UL1699B.		
2.3.5	ALL PV RELATED ROOF ATTACHMENTS TO BE SPACED NO GREATER THAN THE SPAN DISTANCE SPECIFIED BY THE RACKING MANUFACTURER.			2.7.1	INTERCONNECTION NOTES:		
2.3.6	WHEN POSSIBLE, ALL PV RELATED RACKING ATTACHMENTS WILL BE STAGGERED AMONGST THE ROOF FRAMING MEMBERS.			2.7.2	LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [CEC 705.12 (B)]		
2.4.1	WIRING & CONDUIT NOTES:			2.7.3	THE SUM OF THE UTILITY OCPD AND INVERTER CONTINUOUS OUTPUT MAY NOT EXCEED 120% OF BUSBAR RATING [CEC 705.12(D)(2)(3)]		
2.4.2	ALL CONDUIT AND WIRE WILL BE LISTED AND APPROVED FOR THEIR PURPOSE. CONDUIT AND WIRE SPECIFICATIONS ARE BASED ON MINIMUM CODE REQUIREMENTS AND ARE NOT MEANT TO LIMIT UP-SIZING.			2.7.4	THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR. PV DEDICATED BACKFEED BREAKERS MUST BE LOCATED OPPOSITE END OF THE BUS FROM THE UTILITY SOURCE OCPD [CEC 705.12(B)(2)(3)].		
2.4.3	CONDUCTORS SIZED ACCORDING TO CEC 690.8, CEC 690.7.			2.7.5	AT MULTIPLE ELECTRIC POWER SOURCES OUTPUT COMBINER PANEL, TOTAL RATING OF ALL OVERCURRENT DEVICES SHALL NOT EXCEED AMPACITY OF BUSBAR. HOWEVER, THE COMBINED OVERCURRENT DEVICE MAY BE EXCLUDED ACCORDING TO CEC 705.12 (B)(2)(3)(C).		
2.4.4	VOLTAGE DROP LIMITED TO 1.5%.			2.7.6	FEEDER TAP INTERCONNECTION (LOAD SIDE) ACCORDING TO CEC 705.12 (B)(2)(1)		
2.4.5	DC WIRING LIMITED TO MODULE FOOTPRINT. MICROINVERTER WIRING SYSTEMS SHALL BE LOCATED AND SECURED UNDER THE ARRAY W/ SUITABLE WIRING CLIPS.			2.7.7	SUPPLY SIDE TAP INTERCONNECTION ACCORDING TO CEC 705.12 (A) WITH SERVICE ENTRANCE CONDUCTORS IN ACCORDANCE WITH CEC 220.42		
2.4.6	AC CONDUCTORS COLORED OR MARKED AS FOLLOWS: PHASE A OR L1- BLACK PHASE B OR L2- RED, OR OTHER CONVENTION IF THREE PHASE PHASE C OR L3- BLUE, YELLOW, ORANGE ¹ , OR OTHER CONVENTION NEUTRAL- WHITE OR GREY			2.7.8	BACKFEEDING BREAKER FOR ELECTRIC POWER SOURCES OUTPUT IS EXEMPT FROM ADDITIONAL FASTENING [CEC 705.12 (B)(5)]		
2.5	IN 4-WIRE DELTA CONNECTED SYSTEMS THE PHASE WITH HIGHER VOLTAGE TO BE MARKED ORANGE [CEC 110.15].						



CONTRACTOR

CUNAX SOLAR | PLATINUM ILG PARTNER

PHONE: 269-746-2000
ADDRESS: 1804 W WILKIN AVE,
PORTAGE, MI 49024

LIC. NO.: 210113753
HIC. NO.:
EFC. NO.: 5218166

UNAUTHORIZED USE OF THIS
DRAWING SET WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR IS IN
VIOLATION OF ILL. CONTRACT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS

NEW PV SYSTEM: 6.440 kWp

**JONES
RESIDENCE**

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

NOTES

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GREENLANCER

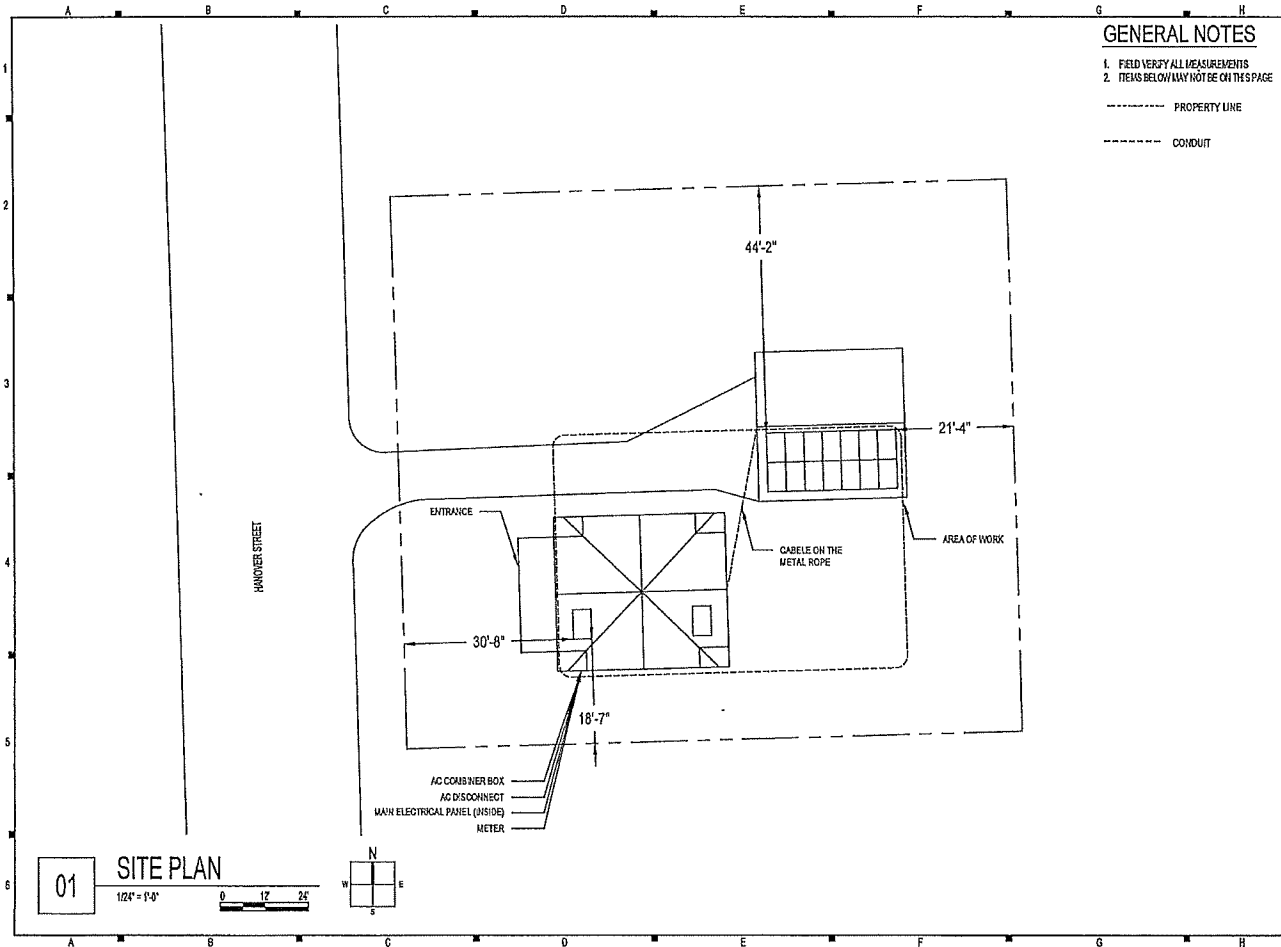
DATE: 03.30.2021

DESIGN BY: V.S.

CHECKED BY: M.M.

REVISIONS

G-001.00
(PAGE 1)



GENERAL NOTES

1. FIELD VERIFY ALL MEASUREMENTS
2. ITEMS BELOW MAY NOT BE ON THIS PAGE

----- PROPERTY LINE

----- CONDUIT



CONTRACTOR

CLIVAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-745-2000

ADDRESS: 1894 WILLOW AVE,
PORTAGE, MI 49824

LIC. NO.: 2101197553

HIC. NO.:

ELE. NO.: 6218185

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NEW PV SYSTEM: 5.440 kWp

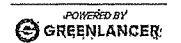
JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49807
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A3/B3)

SITE PLAN



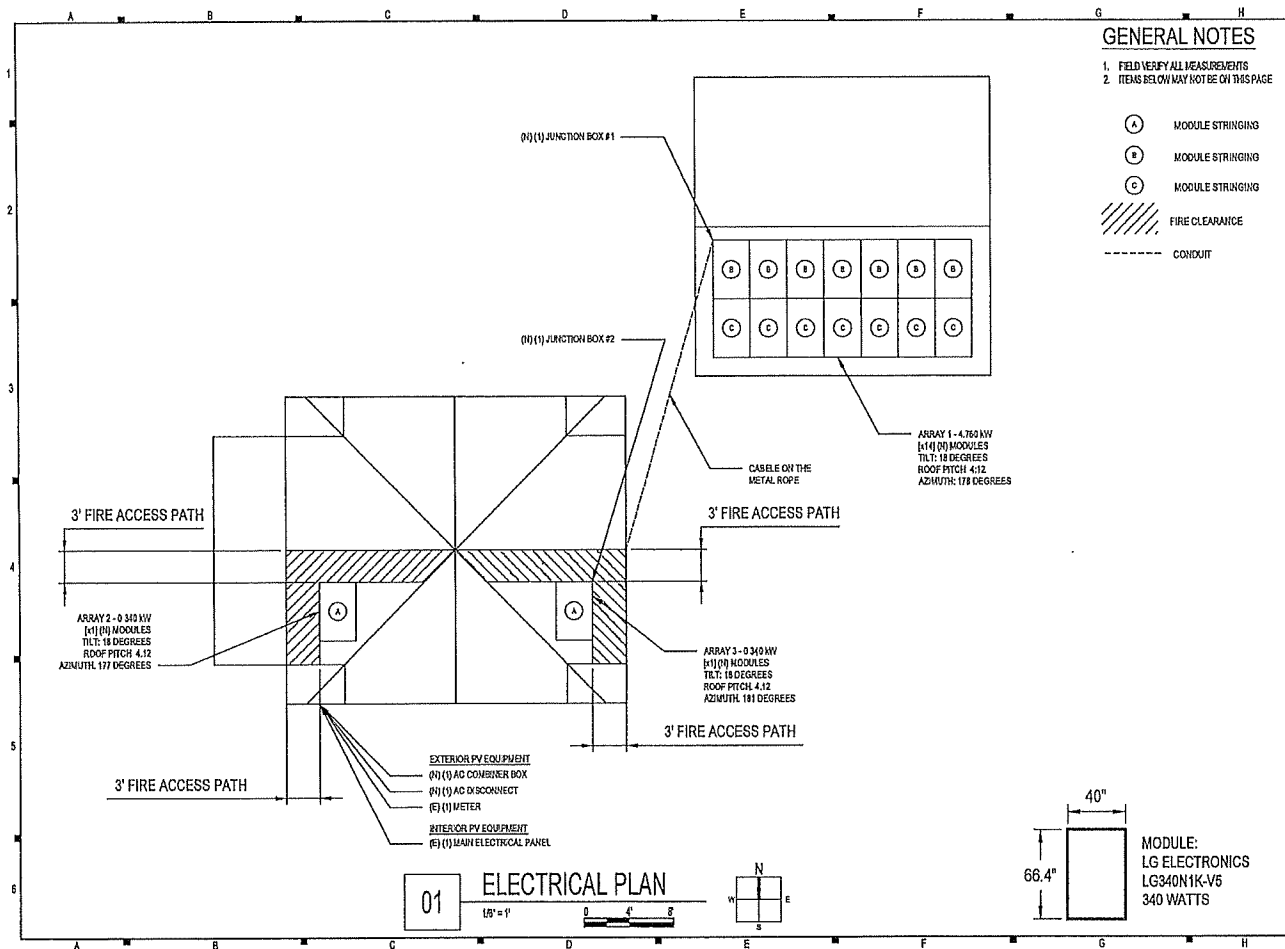
DATE: 06.30.2021

DESIGN BY: V.S.

CHECKED BY: M.J.

REVISIONS

A-101.00
(SHEET 2)



CONTRACTOR

CLIMAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-745-2000

ADDRESS: 1604 W. MILWAU AVE,
PORTAGE, MI 49024

LIC. NO.: 2101137553

HIC. NO.:

ELE. NO.: 6216155

UNAUTHORIZED USE OF THIS
DRAWING FOR ANY PROJECT WITHOUT WRITTEN
PERMISSION FROM CONTRACTOR OR IN
VIOLATION OF ALL COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
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NEW PV SYSTEM: 5.440 kWp

JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 620860000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A-102.00)

ELECTRICAL PLAN

POWERED BY
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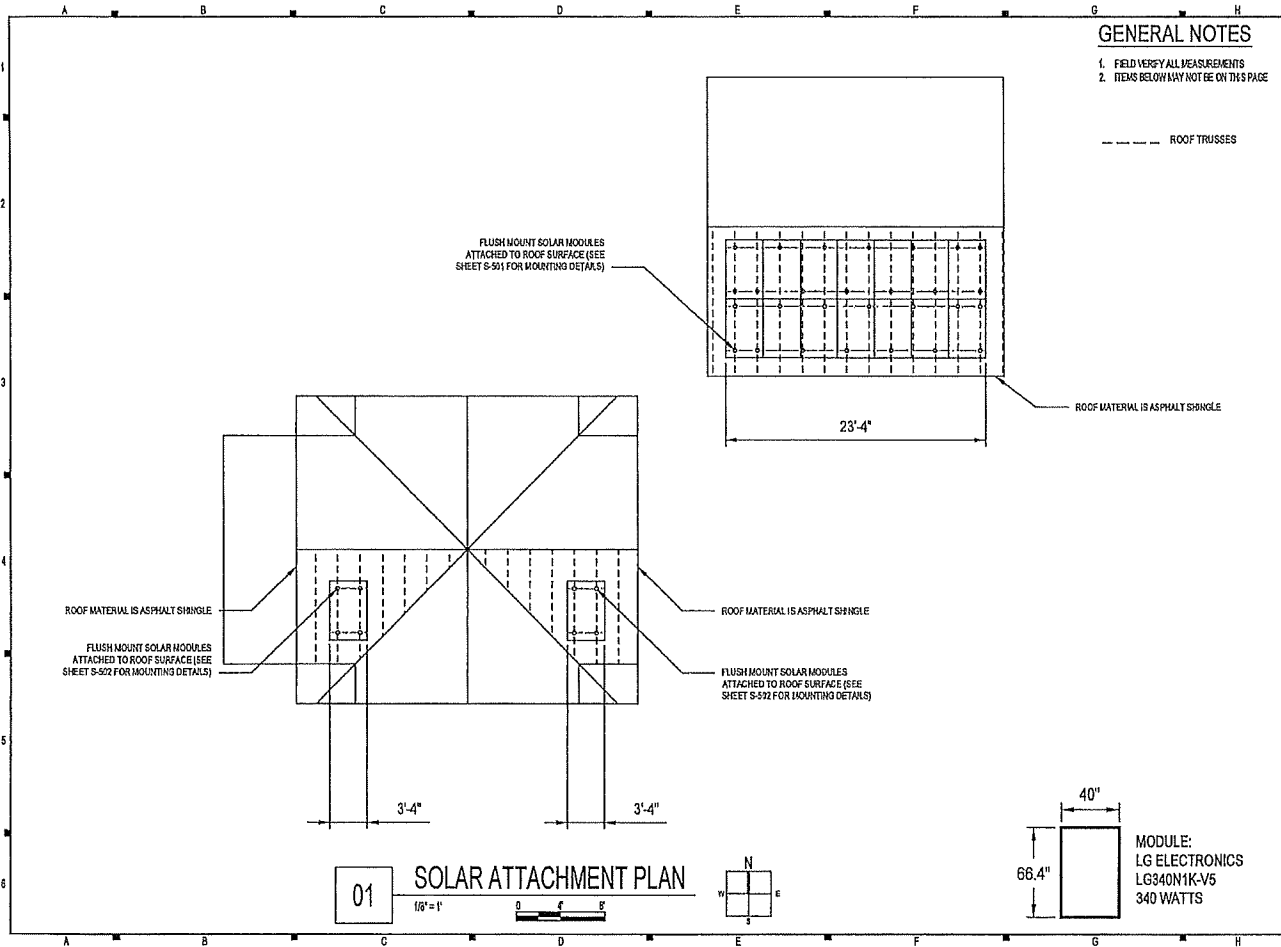
DATE: 08.30.2021

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CHECKED BY: M.J.L.

REVISIONS

A-102.00
(SHEET 1)



CONTRACTOR

CLIMAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-746-2000
ADDRESS: 1004 WILMILAN AVE,
PORTAGE, MI 49004

LIC. NO.: 2101137553
REG. NO.:
ELE. NO.: 6218165

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NEW PV SYSTEM: 5.440 kWp

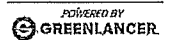
**JONES
RESIDENCE**

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A35015)

SOLAR ATTACHMENT PLAN



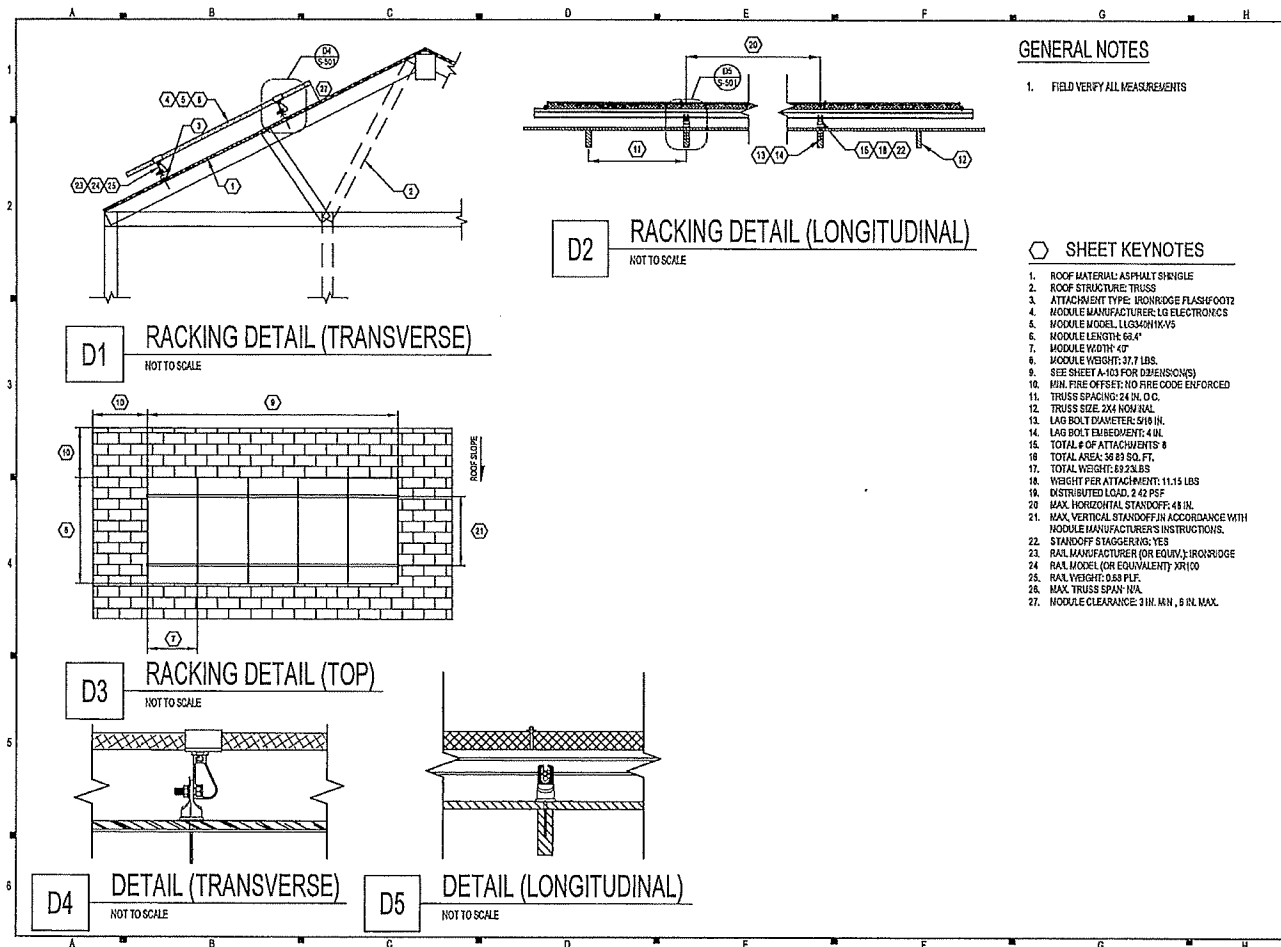
DATE: 03.30.2021

DESIGN BY: V.S.

CHECKED BY: MJA

REVISIONS

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(SHEET 3)



CONTRACTOR

CUNA SOLAR | PLATINUM LG PARTNER

PHONE: 269-746-2000

ADDRESS: 1604 W. MELBA AVE.
PORTAGE, MI 49024

LIC. NO.: 210137553

INC. NO.:

ELE. NO.: 6218165

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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTION.

NEW PV SYSTEM: 5.440 kWp

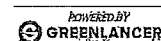
JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A32 B)

ASSEMBLY DETAILS



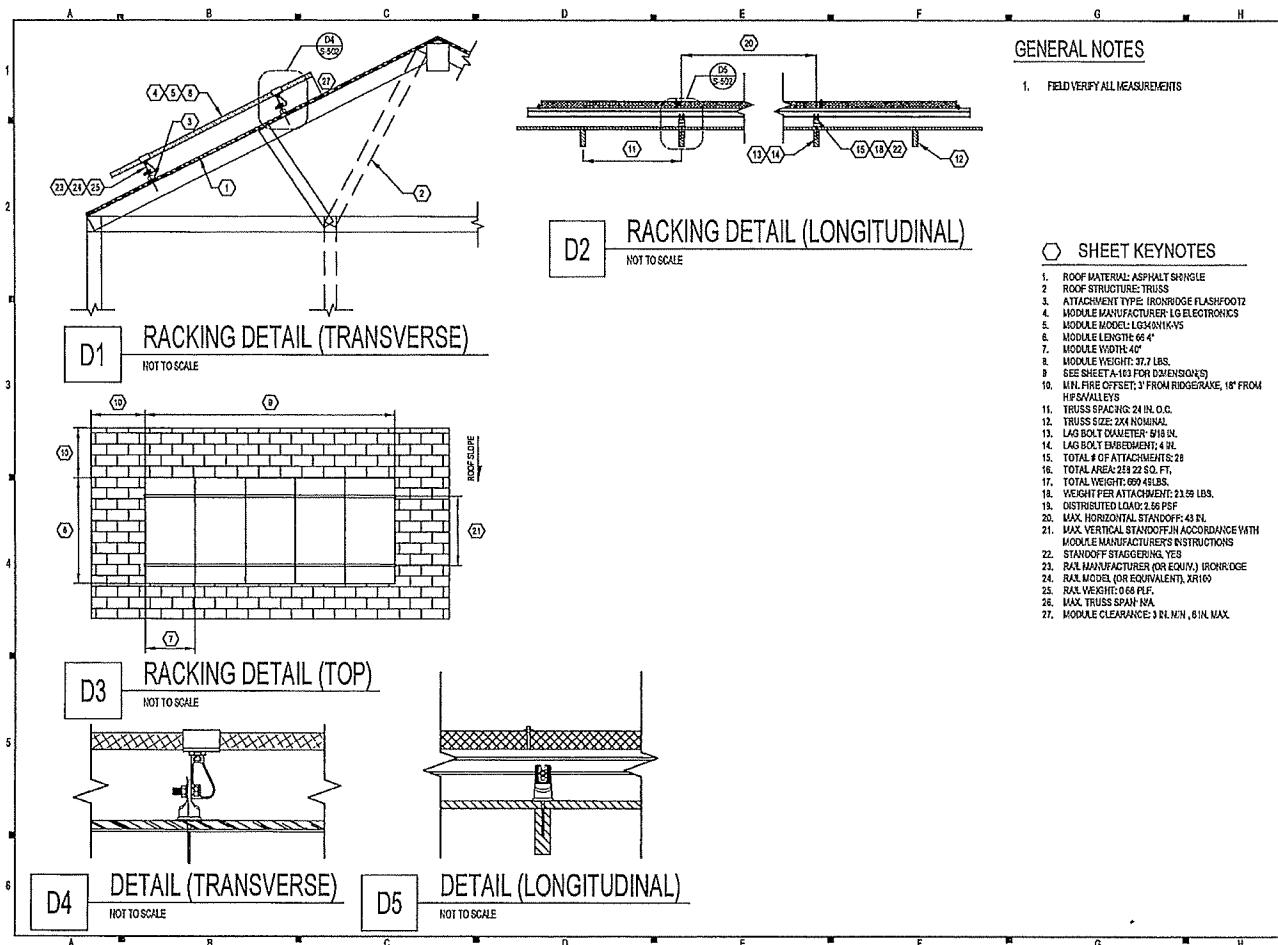
DATE: 03.30.2021

DESIGN BY: V.S.

CHECKED BY: M.M.

REVISIONS

S-501.00
(9 of 11)



CONTRACTOR

CUNAX SOLAR | PLATINUM LG PARTNER

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PORTAGE, MI 49024

LIC. NO.: 210137553

INC. NO.: 5218155

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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS.

NEW PV SYSTEM: 5.440 kWp

JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A4) (1/8" = 1')

ASSEMBLY DETAILS



DATE: 06/20/2021

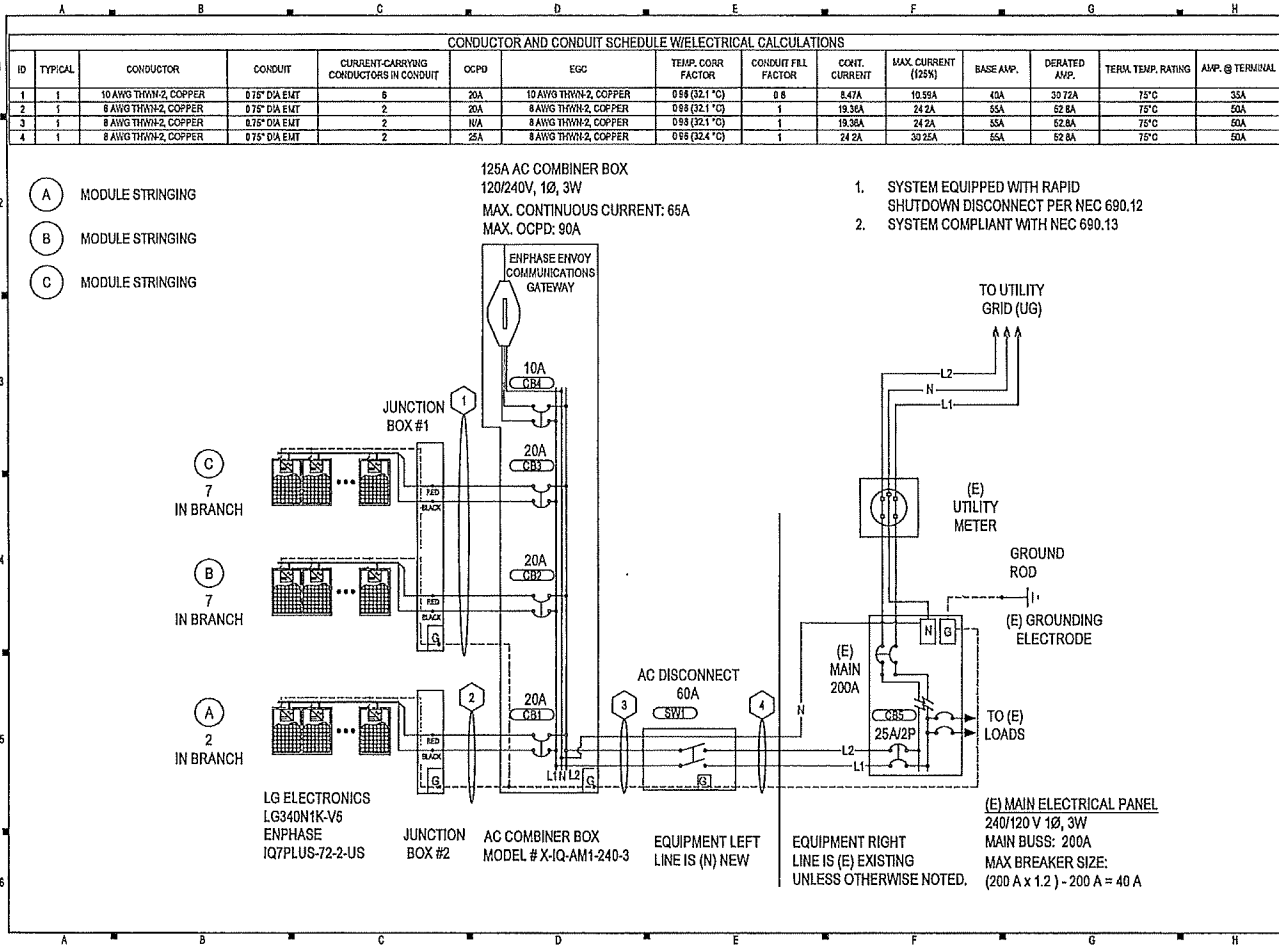
DESIGN BY: V.S.

CHECKED BY: N.M.

REVISIONS

S-502.00

(SHEET 7)



CONTRACTOR

CLINAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-745-2000

ADDRESS: 1034 W KILHAM AVE,
PORTAGE, IN 49024

LIC. NO.: 2191137553

INC. NO.:

ELE. NO.: 6218166

UNAUTHORIZED USE OF THIS
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PERMISSION FROM CONTRACTOR IS
VIOLATION OF U.S. COPYRIGHT LAWS
AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTION.

NEW PV SYSTEM: 6.440 kWp

JONES
RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520560000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A4/B3)

LINE DIAGRAM



DATE: 05.30.2021

DESIGN BY: V.S.

CHECKED BY: M.M.

REVISIONS

E-601.00

(3 OF SET 3)

SYSTEM SUMMARY				MODULES											
INVERTERS PER BRANCH	BRANCH #1	BRANCH #2	BRANCH #3	REF.	QTY.	MAKE AND MODEL	PMAX	PTC	ISO	B/P	VOC	VMP	TEMP. COEFF. OF VOC	FUSE RATING	
MAX AC CURRENT	242A	847A	847A	PM1-16	16	LG ELECTRONICS LG340N1K-V5	340W	313W	10.35A	9.75A	41.2V	34.9V	-0.1111V/C (-0.27K/C)	20A	
MAX AC OUTPUT POWER	590W	2,065W	2,065W	INVERTERS											
ARRAY STC POWER		5,440W		REF.	QTY.	MAKE AND MODEL	AC VOLTAGE	GROUND	DCPD RATING	RATED POWER	MAX OUTPUT CURRENT	MAX INPUT CURRENT	MAX INPUT VOLTAGE	CEC WEIGHTED EFFICIENCY	
ARRAY PTC POWER		5,008W		11-16	16	ENPHASE IQ7PLUS-72-2-US	240V	FLOATING	20A	250W	1.21A	15A	60V	97.0%	
MAX AC CURRENT		19.36A		DISCONNECTS											
MAX AC POWER		4,720W		REF.	QTY.	MAKE AND MODEL	RATED CURRENT	MAX RATED VOLTAGE	OCPDS						
DERATED (CEC) AC POWER		4,720W		SW1	1	SQUARE D DUZ21RB OR EQUIV.	30A	240VAC	REF.	QTY.	RATED CURRENT	MAX VOLTAGE			
ASHRAE EXTREME LOW	-25.1°C (-13.2°F), SOURCE: W K KELLOGG (42.31°, 45.25°)														
ASHRAE 2% HIGH	32.1°C (89.8°F), SOURCE: W K KELLOGG (42.31°, 45.25°)														
BILL OF MATERIALS															
CATEGORY	MAKE	MODEL NUMBER	REF.	QTY.	UNIT	QTY/UNIT	DESCRIPTION								
MODULE	LG ELECTRONICS	LG340N1K-V5	PM1-16	16	PIECES	1	LG ELECTRONICS LG340N1K-V5 340W 60 CELLS, MONOCRYSTALLINE SILICON								
INVERTER	ENPHASE	IQ7PLUS-72-2-US	11-16	16	PIECES	1	ENPHASE IQ7PLUS-72-2-US 250W INVERTER								
DISCONNECT	SQUARE D	DUZ21RB	SW1	1	PIECE	1	SQUARE D DUZ21RB, NON FUSED, 2-POLE, 30A, 240VAC OR EQUIVALENT								
MISC ELECTRICAL EQUIPMENT		GEN-CABLE-CLIP	HDWR19-99	60	PIECES	1	GENERIC CABLE CLIP								
AC COMBINER PANEL		ENPHASE-IX-PANEL	EP1	1	PIECE	1	ENPHASE IX COMBINER (XIQ-AM-1240-2)								
MONITORING		ENPHASE-ENVOY	ENV1	1	PIECE	1	ENPHASE ENVOY								
WIRING	ENPHASE	Q-1E-11-240	EN1-16	16	PIECES	1	ENPHASE ENGAGE (11) TRUNK CABLE								
WIRING	ENPHASE	Q-TERA-10	EN17	1	BUNDLE	10	ENPHASE ENGAGE (11) BRANCH TERMINATOR								
WIRING	ENPHASE	Q-SEAL-10	EN18	1	BUNDLE	10	ENPHASE ENGAGE (11) WATER/TIGHT SEALING CAP								
WIRING		GEN-10-AWG-THWN-2-CU-RD	WR1	90	FEET	1	10 AWG THWN-2, COPPER, RED (LINE 1)								
WIRING		GEN-10-AWG-THWN-2-CU-BLK	WR1	90	FEET	1	10 AWG THWN-2, COPPER, BLACK (LINE 2)								
WIRING		GEN-10-AWG-THWN-2-CU-GR	WR1	45	FEET	1	10 AWG THWN-2, COPPER, GREEN (GROUND)								
WIRING		GEN-10-AWG-THWN-2-CU-RD	WR2	45	FEET	1	10 AWG THWN-2, COPPER, RED (LINE 1)								
WIRING		GEN-10-AWG-THWN-2-CU-BLK	WR2	45	FEET	1	10 AWG THWN-2, COPPER, BLACK (LINE 2)								
WIRING		GEN-10-AWG-THWN-2-CU-GR	WR2	45	FEET	1	10 AWG THWN-2, COPPER, GREEN (GROUND)								
WIRING		GEN-8-AWG-THWN-2-CU-RD	WR3-4	20	FEET	1	8 AWG THWN-2, COPPER, RED (LINE 1)								
WIRING		GEN-8-AWG-THWN-2-CU-BLK	WR3-4	20	FEET	1	8 AWG THWN-2, COPPER, BLACK (LINE 2)								
WIRING		GEN-8-AWG-THWN-2-CU-WH	WR3-4	20	FEET	1	8 AWG THWN-2, COPPER, WHITE (NEUTRAL)								
WIRING		GEN-8-AWG-THWN-2-CU-GR	WR3-4	20	FEET	1	8 AWG THWN-2, COPPER, GREEN (GROUND)								
WIREWAY	ENPHASE	ET-SPLK-05	EN6	1	BUNDLE	5	ENPHASE ENGAGE (11) ENGAGE COUPLER								
WIREWAY		GEN-EMT-0.75" DIA	WV1-6	65	FEET	1	EMT CONDUIT, 0.75" DIA								
OCPD	GENERIC MANUFACTURER	GEN-CB-20A-240VAC	CB1-3	3	PIECES	1	CIRCUIT BREAKER, 20A, 240VAC								
OCPD	GENERIC MANUFACTURER	GEN-CB-10A-240VAC	CB4	1	PIECE	1	CIRCUIT BREAKER, 10A, 240VAC								
OCPD	GENERIC MANUFACTURER	GEN-CB-25A-240VAC	CB5	1	PIECE	1	CIRCUIT BREAKER, 25A, 240VAC								
TRANSITION BOX	GENERIC MANUFACTURER	GEN-AWB-TB-4-4X	JB1-2	1	PIECE	2	TRANSITION/PASS-THROUGH BOX, WITH 4 TERMINAL BLOCKS								



CONTRACTOR
CURTIS SOLAR | PLATINUM LG PARTNER
PHONE: 268-745-2000
ADDRESS: 1604 W MULHAM AVE, PORTAGE, MI 49024

LIC. NO.: 2161137553
REC. NO.:
ELE. NO.: 6216165
UNAUTHORIZED USE OF THIS DRAWING SET WITHOUT WRITTEN PERMISSION FROM CONTRACTOR IS IN VIOLATION OF U.S. COPYRIGHT LAWS AND WILL BE SUBJECT TO CIVIL DAMAGES AND PENALTIES.

NEW PV SYSTEM: 5.440 kWp
JONES RESIDENCE
28 HANOVER STREET, BATTLE CREEK, MI 49037
APN: 620660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)
DESIGN TABLES
POWERED BY **GREENLANCER**
DATE: 08.30.2021
DESIGN BY: V.S.
CHECKED BY: MJL
REVISIONS

E-602.00
(3-4322 1)

LABELING NOTES

1. LABELS SHALL MEET REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE, REGULATORY ELECTRICAL CODE 605.11, OSHA STANDARD 1910.145, ANSI Z353

2. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION

3. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.

4. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.

5. ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND. [ANSI Z353]

⚠ WARNING
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL 1
AT EACH DISCONNECTING MEANS FOR
PHOTOVOLTAIC EQUIPMENT (2" X 4").
[NEC 690.13]

WARNING
POWER SOURCE
OUTPUT CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

LABEL 2
AT POINT OF INTERCONNECTION
OVERCURRENT DEVICE (2" X 4").
[NEC 705.12(B)(2)(3)(B)]

**PHOTOVOLTAIC SYSTEM
AC DISCONNECT**

RATED AC OUTPUT CURRENT **19.55** A
NOMINAL OPERATING AC VOLTAGE **262** V

LABEL 3
AT POINT OF INTERCONNECTION, MARKED
AT DISCONNECTING MEANS (4" X 2").
[NEC 690.54]

PHOTOVOLTAIC SOLAR
AC DISCONNECT

LABEL 4
AT EACH AC DISCONNECTING MEANS
(4" X 1")
[NEC 690.13(B)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 5
AT RAPID SHUTDOWN DISCONNECT SWITCH (5 1/4" X 2")
(NEC 690.56(C)(3))

**SOLAR PV SYSTEM
EQUIPPED WITH
RAPID SHUTDOWN**



TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY

LABEL 6
AT RAPID SHUTDOWN SYSTEM
(3 3/4" X 5 1/4", (NEC 690 55/CX1VA))

⚠ WARNING
DUAL POWER SUPPLY
SOURCES UTILITY GRID
AND PV SOLAR
ELECTRIC SYSTEM

LABEL 7
AT POINT OF INTERCONNECTION
 (2 3/4" X 1 5/8").
 [NEC 705.12(B)(3)]

INTERACTIVE PHOTOVOLTAIC SYSTEM CONNECTED
PHOTOVOLTAIC SYSTEM DISCONNECT LOCATED
SOUTH SIDE OF THE HOUSE

DIRECTORY
PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS IF NOT IN THE SAME LOCATION [5 3/4" X 1 1/8"]
(NEC 690.55(B))

WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A DIRECTORY IN ACCORDANCE WITH 705.13 SHALL BE PROVIDED AT EACH PV SYSTEM DISCONNECTING MEANS. PV SYSTEM EQUIPMENT AND DISCONNECTING MEANS SHALL NOT BE INSTALLED IN BATHROOMS.
[NEC 690.4(D), (E)]

**WARNING PHOTOVOLTAIC
POWER SOURCE!**

LABEL 9
AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WRING
METHODS; SPACED AT MAXIMUM 10 FT SECTION OR WHERE
SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS,
OR FLOORS (5 3/4" X 1 1/8").
[NEC 690.31(G)]
LETTERS AT LEAST 3/8" HIGH; WHITE ON RED BACKGROUND;
REFLECTIVE
[IFC 625.11.1.1]

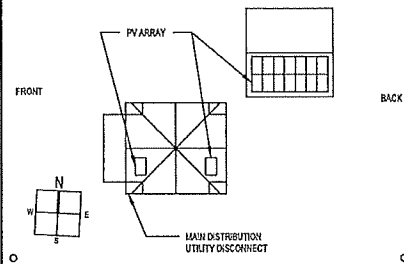
▲ CAUTION
SOLAR ELECTRIC SYSTEM CONNECTED

LABEL 10
AT UTILITY METER (5 3/4" X 1 1/8")
[NEC 690.56(B)]

WARNING
SOLAR ELECTRIC
CIRCUIT BREAKER
IS BACKFEED

LABEL B
AT POINT OF INTERCONNECTION
(2" X 1")
[NEC 705.12(B)(3)]

!CAUTION!
POWER TO THIS BUILDING IS ALSO SUPPLIED
FROM ROOF MOUNTED SOLAR ARRAYS WITH
SAFETY DISCONNECTS AS SHOWN:



CONTRACTOR

CLIMAX SOLAR | PLATINUM LG PARTNER

PHONE: 269-745-2000

ADDRESS: 1604 W. MILHAM AVE,
PORTAGE, MI 49024

LC NO: 2101137553

REC. NO.:
FILE NO.: 6216166

UNAUTHORIZED USE OF THIS
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AND WILL BE SUBJECT TO CIVIL
DAMAGES AND PROSECUTIONS

NEW PV SYSTEM: 5.440 kWp

JONES
RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

PLACARDS

ADHERED BY
 GREENLANDER

DATE: 06.30.2021

DESIGN BY: V.S.

CHECKED BY: HJM

DECLARATION

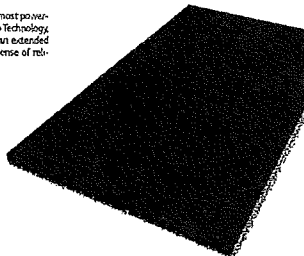
E-603.00

(SHEET 14)

LG NeON[®] 2 Black

350W | 345W | **340W** | 335W

The LG NeON[®] 2 is LG's best selling solar module, and is one of the most powerful and versatile modules on the market today. Featuring LG's Ceo Technology, the LG NeON[®] 2 increases power output. New updates include an extended performance warranty to 90.08 % to give customers a greater sense of reliability and peace of mind.



Feature



Enhanced Performance Warranty

LG NeON[®] 2 has an enhanced performance warranty. After 25 years, LG NeON[®] 2 is guaranteed to perform at minimum 90.08% of initial performance.



Enhanced Product Warranty

LG has extended the warranty of the NeON[®] 2 to 25 years, which is among the top of industry standards.



Better Performance on a Sunny Day

LG NeON[®] 2 now performs better on sunny days, thanks to its improved temperature coefficient.



Roof Aesthetics

LG NeON[®] 2 has been designed with aesthetics in mind using thinner wires that appear all black at a distance. The LG NeON[®] 2 can become the aesthetic value of your home with a more modern design.

About LG Electronics

LG Electronics is a global leader in consumer electronics, appliances, and telecommunications. The company has a rich history of innovation and excellence, and is committed to providing high-quality products and services to customers worldwide. LG Electronics is a member of the LG Group, which is one of the largest and most influential conglomerates in the world.



LG NeON[®] 2 Black

LG350N1K-VS | LG345N1K-VS | LG340N1K-VS | LG335N1K-VS

General Data

Cell Technology	Monocrystalline Mono
Cell Size	182mm x 182mm
Cell Efficiency	22.8%
Module Efficiency	22.8%
Module Power	340W
Module Dimensions (mm)	1715 x 1135 x 30
Weight (kg)	11.5
Max. Power (W)	340W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V
Max. Power (W)	340W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V

Certifications and Warranty

CE	IEC 61215-1/-2, IEC 61730-1/-2
UL	UL 1709, UL 1741
ISO	ISO 9001, ISO 14001, ISO 45001
RoHS	RoHS 2.0
REACH	REACH SVHC
UL	UL 1709, UL 1741
ISO	ISO 9001, ISO 14001, ISO 45001
RoHS	RoHS 2.0
REACH	REACH SVHC

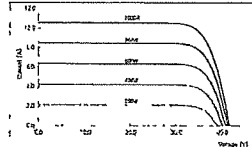
Temperature Characteristics

Temp. Coefficient of P _{max}	-0.43 %/°C
Temp. Coefficient of V _{oc}	-0.33 %/°C
Temp. Coefficient of I _{sc}	0.05 %/°C
Temp. Coefficient of R _s	-0.002 %/°C

Electrical Properties (STC)

Model	LG350N1K-VS
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V

I-V Curves



Electrical Properties (STC)

Model	LG350N1K-VS
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V

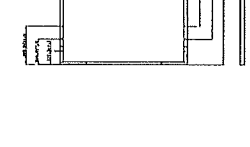
Operating Conditions

Operating Temperature	-40 ~ +85 °C
Humidity	95% RH
Wind Speed	10 m/s
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V

Packaging Information

Weight (kg)	11.5
Volume (m³)	0.003
Max. Power (W)	350W
Max. Current (A)	10.0A
Max. Voltage (V)	33.0V

Dimensions (mm)



CONTRACTOR

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LG NO.: 2101137553

HSE NO.:

ELE NO.: 6218165

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NEW PV SYSTEM: 5.440 kWp

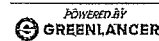
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APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (A) (B)

RESOURCE DOCUMENT



DATE: 06/30/2021

DESIGN BY: V.S.

CHECKED BY: M.H.

REVISIONS

R-001.00

(06/01/19)

011a SH-46
Enphase Microinverters

PRELIMINARY / US

Enphase IQ 7, IQ7+, and IQ 7X Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7, IQ 7+ and IQ 7X Micro integrate seamlessly with the Enphase IQ Envoy™, Enphase Q Aggregator™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

The IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

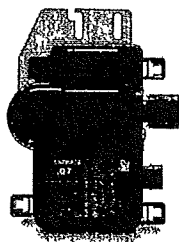
Productive and Reliable

- Optimized for high-powered 60-cell, 72-cell, and 96-cell modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL Listed

Smart Grid Ready

- Complies with a dranded grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

** The IQ 7+ Micro is required to support 72-cell modules.
** The IQ 7X is required to support 96-cell modules.



To learn more about Enphase offerings, visit enphase.com

ENPHASE.

Enphase IQ 7, IQ 7+, and IQ 7X Microinverters

INPUT DATA (DC)	IQ7P-US-72-2-US	IQ7P-US-72-2-US	IQ7X-96-2-US
Compatible module type(s)	181 W 36 V	215 W 48 V	235 W 48 V
Module compatibility	60-cell PV modules only	60-cell and 72-cell PV modules	96-cell PV modules
Maximum DC voltage	60 V	60 V	60 V
Peak power tracking voltage	27 V - 37 V	27 V - 45 V	27 V - 45 V
Operating temperature	-40°C to 60°C	-40°C to 60°C	-40°C to 60°C
Min/Max input voltage	22 V / 48 V	22 V / 60 V	22 V / 80 V
DC input short-circuit current (Isc)	3.3 A	3.3 A	3.3 A
Overvoltage class DC port	II	II	II
DC port configuration	1 x 1 ungrounded string. No additional DC side protection required.	1 x 1 ungrounded string. No additional DC side protection required.	1 x 1 ungrounded string. No additional DC side protection required.
OUTPUT DATA (AC)	IQ 7 Microinverter	IQ 7+ Microinverter	IQ 7X Microinverter
Maximum continuous output power	240 VA	240 VA	240 VA
Maximum AC voltage	240 V	240 V	240 V
Maximum AC current	1.0 A	1.0 A	1.0 A
Maximum continuous output current	1.0 A	1.0 A	1.0 A
Extended frequency range	47 - 68 Hz	47 - 68 Hz	47 - 68 Hz
Maximum output current per 20 A (R-L) branch circuit	13 (248 VA)	13 (248 VA)	13 (248 VA)
AC output short-circuit current (Isc)	0 A	0 A	0 A
AC port backfeed current	0 A	0 A	0 A
Power factor (adjustable)	0.7 leading - 0.7 lagging	0.7 leading - 0.7 lagging	0.7 leading - 0.7 lagging
Efficiency	92.0% @ 240 V	92.0% @ 240 V	92.0% @ 240 V
Weighted efficiency	92.0%	92.0%	92.0%
MECHANICAL DATA	IQ 7 Microinverter	IQ 7+ Microinverter	IQ 7X Microinverter
Operating temperature range	-40°C to +55°C	-40°C to +55°C	-40°C to +55°C
Relative humidity range	45 to 100% (condensing)	45 to 100% (condensing)	45 to 100% (condensing)
Dimensions (WxHxD)	212 mm x 114 mm x 30.2 mm (without bracket)	212 mm x 114 mm x 30.2 mm (without bracket)	212 mm x 114 mm x 30.2 mm (without bracket)
Weight (WxHxD)	91 g (0.2 lb)	91 g (0.2 lb)	91 g (0.2 lb)
Cooling	Natural convection - No fan	Natural convection - No fan	Natural convection - No fan
Approved for local installation	Yes	Yes	Yes
Pollution degree	PO3	PO3	PO3
Environmental category / UV exposure rating	IEC 60721-3-2 Class 3	IEC 60721-3-2 Class 3	IEC 60721-3-2 Class 3
FEATURES	IQ 7 Microinverter	IQ 7+ Microinverter	IQ 7X Microinverter
Communication	Enphase Enlighten™ monitoring and MyEnlighten™ monitoring option	Enphase Enlighten™ monitoring and MyEnlighten™ monitoring option	Enphase Enlighten™ monitoring and MyEnlighten™ monitoring option
Compliance	UL 60361-1, UL 1741, UL 1741-SA, UL 1741-CA, UL 1741-CA2, UL 1741-CA3, UL 1741-CA4, UL 1741-CA5, UL 1741-CA6, UL 1741-CA7, UL 1741-CA8, UL 1741-CA9, UL 1741-CA10, UL 1741-CA11, UL 1741-CA12, UL 1741-CA13, UL 1741-CA14, UL 1741-CA15, UL 1741-CA16, UL 1741-CA17, UL 1741-CA18, UL 1741-CA19, UL 1741-CA20, UL 1741-CA21, UL 1741-CA22, UL 1741-CA23, UL 1741-CA24, UL 1741-CA25, UL 1741-CA26, UL 1741-CA27, UL 1741-CA28, UL 1741-CA29, UL 1741-CA30, UL 1741-CA31, UL 1741-CA32, UL 1741-CA33, UL 1741-CA34, UL 1741-CA35, UL 1741-CA36, UL 1741-CA37, UL 1741-CA38, UL 1741-CA39, UL 1741-CA40, UL 1741-CA41, UL 1741-CA42, UL 1741-CA43, UL 1741-CA44, UL 1741-CA45, UL 1741-CA46, UL 1741-CA47, UL 1741-CA48, UL 1741-CA49, UL 1741-CA50, UL 1741-CA51, UL 1741-CA52, UL 1741-CA53, UL 1741-CA54, UL 1741-CA55, UL 1741-CA56, UL 1741-CA57, UL 1741-CA58, UL 1741-CA59, UL 1741-CA60, UL 1741-CA61, UL 1741-CA62, UL 1741-CA63, UL 1741-CA64, UL 1741-CA65, UL 1741-CA66, UL 1741-CA67, UL 1741-CA68, UL 1741-CA69, UL 1741-CA70, UL 1741-CA71, UL 1741-CA72, UL 1741-CA73, UL 1741-CA74, UL 1741-CA75, UL 1741-CA76, UL 1741-CA77, UL 1741-CA78, UL 1741-CA79, UL 1741-CA80, UL 1741-CA81, UL 1741-CA82, UL 1741-CA83, UL 1741-CA84, UL 1741-CA85, UL 1741-CA86, UL 1741-CA87, UL 1741-CA88, UL 1741-CA89, UL 1741-CA90, UL 1741-CA91, UL 1741-CA92, UL 1741-CA93, UL 1741-CA94, UL 1741-CA95, UL 1741-CA96, UL 1741-CA97, UL 1741-CA98, UL 1741-CA99, UL 1741-CA100	UL 60361-1, UL 1741, UL 1741-SA, UL 1741-CA, UL 1741-CA2, UL 1741-CA3, UL 1741-CA4, UL 1741-CA5, UL 1741-CA6, UL 1741-CA7, UL 1741-CA8, UL 1741-CA9, UL 1741-CA10, UL 1741-CA11, UL 1741-CA12, UL 1741-CA13, UL 1741-CA14, UL 1741-CA15, UL 1741-CA16, UL 1741-CA17, UL 1741-CA18, UL 1741-CA19, UL 1741-CA20, UL 1741-CA21, UL 1741-CA22, UL 1741-CA23, UL 1741-CA24, UL 1741-CA25, UL 1741-CA26, UL 1741-CA27, UL 1741-CA28, UL 1741-CA29, UL 1741-CA30, UL 1741-CA31, UL 1741-CA32, UL 1741-CA33, UL 1741-CA34, UL 1741-CA35, UL 1741-CA36, UL 1741-CA37, UL 1741-CA38, UL 1741-CA39, UL 1741-CA40, UL 1741-CA41, UL 1741-CA42, UL 1741-CA43, UL 1741-CA44, UL 1741-CA45, UL 1741-CA46, UL 1741-CA47, UL 1741-CA48, UL 1741-CA49, UL 1741-CA50, UL 1741-CA51, UL 1741-CA52, UL 1741-CA53, UL 1741-CA54, UL 1741-CA55, UL 1741-CA56, UL 1741-CA57, UL 1741-CA58, UL 1741-CA59, UL 1741-CA60, UL 1741-CA61, UL 1741-CA62, UL 1741-CA63, UL 1741-CA64, UL 1741-CA65, UL 1741-CA66, UL 1741-CA67, UL 1741-CA68, UL 1741-CA69, UL 1741-CA70, UL 1741-CA71, UL 1741-CA72, UL 1741-CA73, UL 1741-CA74, UL 1741-CA75, UL 1741-CA76, UL 1741-CA77, UL 1741-CA78, UL 1741-CA79, UL 1741-CA80, UL 1741-CA81, UL 1741-CA82, UL 1741-CA83, UL 1741-CA84, UL 1741-CA85, UL 1741-CA86, UL 1741-CA87, UL 1741-CA88, UL 1741-CA89, UL 1741-CA90, UL 1741-CA91, UL 1741-CA92, UL 1741-CA93, UL 1741-CA94, UL 1741-CA95, UL 1741-CA96, UL 1741-CA97, UL 1741-CA98, UL 1741-CA99, UL 1741-CA100	UL 60361-1, UL 1741, UL 1741-SA, UL 1741-CA, UL 1741-CA2, UL 1741-CA3, UL 1741-CA4, UL 1741-CA5, UL 1741-CA6, UL 1741-CA7, UL 1741-CA8, UL 1741-CA9, UL 1741-CA10, UL 1741-CA11, UL 1741-CA12, UL 1741-CA13, UL 1741-CA14, UL 1741-CA15, UL 1741-CA16, UL 1741-CA17, UL 1741-CA18, UL 1741-CA19, UL 1741-CA20, UL 1741-CA21, UL 1741-CA22, UL 1741-CA23, UL 1741-CA24, UL 1741-CA25, UL 1741-CA26, UL 1741-CA27, UL 1741-CA28, UL 1741-CA29, UL 1741-CA30, UL 1741-CA31, UL 1741-CA32, UL 1741-CA33, UL 1741-CA34, UL 1741-CA35, UL 1741-CA36, UL 1741-CA37, UL 1741-CA38, UL 1741-CA39, UL 1741-CA40, UL 1741-CA41, UL 1741-CA42, UL 1741-CA43, UL 1741-CA44, UL 1741-CA45, UL 1741-CA46, UL 1741-CA47, UL 1741-CA48, UL 1741-CA49, UL 1741-CA50, UL 1741-CA51, UL 1741-CA52, UL 1741-CA53, UL 1741-CA54, UL 1741-CA55, UL 1741-CA56, UL 1741-CA57, UL 1741-CA58, UL 1741-CA59, UL 1741-CA60, UL 1741-CA61, UL 1741-CA62, UL 1741-CA63, UL 1741-CA64, UL 1741-CA65, UL 1741-CA66, UL 1741-CA67, UL 1741-CA68, UL 1741-CA69, UL 1741-CA70, UL 1741-CA71, UL 1741-CA72, UL 1741-CA73, UL 1741-CA74, UL 1741-CA75, UL 1741-CA76, UL 1741-CA77, UL 1741-CA78, UL 1741-CA79, UL 1741-CA80, UL 1741-CA81, UL 1741-CA82, UL 1741-CA83, UL 1741-CA84, UL 1741-CA85, UL 1741-CA86, UL 1741-CA87, UL 1741-CA88, UL 1741-CA89, UL 1741-CA90, UL 1741-CA91, UL 1741-CA92, UL 1741-CA93, UL 1741-CA94, UL 1741-CA95, UL 1741-CA96, UL 1741-CA97, UL 1741-CA98, UL 1741-CA99, UL 1741-CA100

1. No reflected irradiance for the reliability of outdoor use. Enphase does not warrant the reliability of outdoor use.
2. Thermal ratings are based on the rated operating conditions required by the utility.

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2017-11-15 PVL111

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INC. NO.: 5218165

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NEW PV SYSTEM: 5.440 kWp

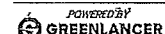
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APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11 x 17 INCHES

RESOURCE DOCUMENT



DATE: 06/30/2021

DESIGN BY: V.S.

CHECKED BY: W.J.

REVISIONS

R-002.00
(sheet 1)

31.01.2018

QIJW.E341165 - Photovoltaic Rapid Shutdown System Equipment



ONLINE CERTIFICATIONS DIRECTORY

QIJW.E341165
Photovoltaic Rapid Shutdown System Equipment[Page Bottom](#)**Photovoltaic Rapid Shutdown System Equipment**[See General Information for Photovoltaic Rapid Shutdown System Equipment](#)ENPHASE ENERGY INC
1420 N McDowell Blvd
Petaluma, CA 94954-6515 USA

E341165

Cat. No.	Function	Ratings
Photovoltaic rapid shutdown system equipment		
M190-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 190W
M210-B4	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 210 W
M215-60	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 215W
M250-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 250W
S230-60-LL-X-US	Inverter/AC Attenuator	Input: 22-48VDC Output: 208 or 240, 220W
S280-60-LL-X-US	Inverter/AC Attenuator	Input: 22-48VDC Output: 208 or 240, 270W
IQ6PLUS-72-X-US*(a)(b) IQ6PLUS-72-ACH*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 280W
IQ6-60-X-US*(a)(b) IQ6-60-ACH-US*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 230W
IQ7PLUS-72-X-US*(a)(b) IQ7PLUS-72-ACH*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 290W
IQ7-60-X-US*(a)(b) IQ7-60-ACH-US*(b)	Inverter/AC Attenuator	Input: 16-48VDC Output: 208 or 240, 240W

(a) - Where X may be 2 or 5

(b) - Where * may be any combination of letters or numbers or hyphen or none

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NEW PV SYSTEM: 5.440 kWp

**JONES
RESIDENCE**28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 620660000240**ENGINEER OF RECORD**

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT **GREENLANCER**

DATE: 06.09.2021

DESIGN BY: V.S.

CHECKED BY: M.M.

REVISIONS

R-004.00
(SHEET 1)

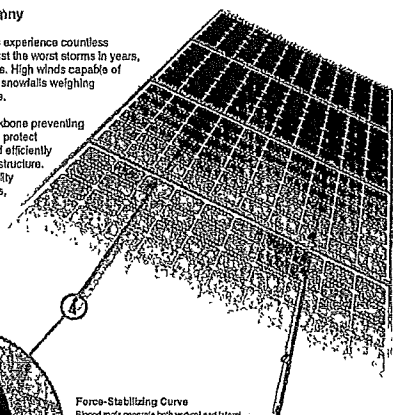


XR Rail Family

Solar Is Not Always Sunny

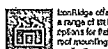
Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve
Bipod rails generate both vertical and lateral forces on mounting rails which can cause them to bend and fail. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater durability during extreme weather and a longer system lifetime.

Compatible With Flat & Pitched Roofs



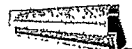
Corrosion-Resistant Materials

All XR Rails are made of marine-grade aluminum alloy then provided with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.



XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.



XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves 8' foot spans, while remaining light and economical.

- 8' spanning capability
- Moderate load capability
- Clear anodized finish
- Internal splices available



XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also resisting spans up to 8' in ft.

- 8' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12' foot or more for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The following table was prepared in compliance with applicable engineering codes and standards. Values are based on the following criteria: ASCE 7-10, Roof Zone 1, Exposure B, Roof Slope of 7 to 27 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed span tables and certifications.

Roof Load (PSF)		Rail Span (ft)	
Row (PSF)	Wind (PSF)	XR10	XR100
None	100		
	120		
	140		
	160		
10-20	100		
	120		
	140		
	160		
30	100		
	160		
40	100		
	160		
50-70	160		
	160		



CONTRACTOR

CLIVAX SOLAR | PLATINUM LO PARTNER

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FIG. NO.:

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NEW PV SYSTEM: 5.440 kWp

JONES RESIDENCE

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APN: 520666000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT



DATE: 06/30/2021

DESIGN BY: V.S.

CHECKED BY: M.M.

REVISIONS

R-005.00

(SHEET 19)

IRONRIDGE

FlashFoot2

The Strongest Attachment in Solar

IronRidge FlashFoot2 raises the bar in solar roof protection. The unique water seal design is both elevated and encapsulated, delivering redundant layers of protection against water intrusion. In addition, the twist-on Cap perfectly aligns the rail attachment with the lag bolt to maximize mechanical strength.

Twist-On Cap

FlashFoot2's unique Cap design encapsulates the lag bolt and locks into place with a simple twist. The Cap helps FlashFoot2 deliver superior structural strength, by aligning the rail and lag bolt in a concentric load path.

Three-Tier Water Seal

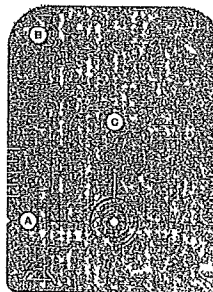
FlashFoot2's rail architecture creates a three tiered system of protection. An elevated platform diverts water away, while a stack of rugged components raises the seal an entire inch. The seal is then fully encapsulated by the Cap. FlashFoot2 is the first solar attachment to pass the TAS-100 Wind-Driven Rain Test.

Single Socket Size

A custom-designed lag bolt allows you to install FlashFoot2 with the same 7/16" socket size used on other Flash Mount System components.

Water-Shedding Design
An elevated platform diverts water away from the water seal.

Installation Features



A Alignment Markers

Quickly align the flashing with chalk lines to find pilot holes.

B Rounded Corners

Makes it easier to handle and insert under the roof shingles.

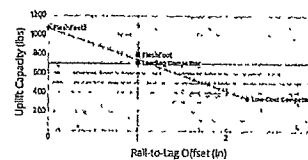
C Reinforcement Ribs

Help to stiffen the flashing and prevent any bending or cinking during installation.

Benefits of Concentric Loading

Traditional solar attachments have a horizontal offset between the rail and lag bolt, which introduces leverage on the lag bolt and decreases uplift capacity.

FlashFoot2 is the only product to align the rail and lag bolt. This concentric loading design results in a stronger attachment for the system.



Testing & Certification

Structural Certification

Designed and Certified for Compliance with the International Building Code & ASCE/SEI-7.

Water Seal Ratings

Water Sealing Tested to UL 441 Section 27 "Rain Test" and TAS 100-65 "Wind Driven Rain Test" by Intertek. Ratings applicable for composition shingle roofs having slopes between 2:12 and 12:12.

UL 2703

Conforms to UL 2703 Mechanical and Bonding Requirements. See Flash Mount Install Manual for full ratings.



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DAMAGES AND PROSECUTIONS

NEW PV SYSTEM: 6.440 kWp

JONES RESIDENCE

28 HANOVER STREET,
BATTLE CREEK, MI 49037
APN: 520660000240

ENGINEER OF RECORD

PAPER SIZE: 11" x 17" (ANSI B)

RESOURCE DOCUMENT

POWERED BY
GREENLANCER

DATE: 05/30/2021

DESIGN BY: V.S.

CHECKED BY: MM

REVISIONS

R-006.00
(REVISION)



Battle Creek Historic District Commission

Staff Report

181 W. Emmett Street

Meeting: August 9, 2021
Case No. H-13-21

To: Historic District Commission

From: Eric Feldt, Planning/ Zoning Coordinator, AICP, CFM

Date: July 27, 2021

Subject: The petition, filed by X-Tream Roofing LLC, is for the issuance of a Certificate of Appropriateness for various new roof sections at 181 W. Emmett Street pursuant to Zoning and Historic District Commission requirements.

Summary

The business owner wishes to install new metal roofing at various sections of the subject building to replace the existing aging roof. The applicant filed the subject HDC Certificate of Appropriateness because the subject property (181 W. Emmett Street) is located in the Old Advent Town historic district. Staff recommends approval of the project at because the project meets the standards outlined in Chapter 1470.09 "Review of Applications", Chapter 1470.17 "Preservation of Historic Features" and the Secretary of the Interior's Standards and Guidelines.



Figure 1. Map of the neighborhood showing the subject site (181 W. Emmett Street). Aerial photograph provided by City of Battle Creek, dated April 2020 (approx.).

Site & History

The subject site is located at 181 W. Emmett Street, north of the Federal Center. See Figure 1. It is also in the Old Advent Town local historic district. According to the City's Assessor's records, the site consists of 3.3 acres in size and is developed with a one- and two-story health/ medical facility (Grace Health), built in 1994. The building consists of an expansive single-story level, with a central two-story portion. Further, the building has multiple exterior entrances facing a large paved parking lot. The main public entrance has a large drive-through canopy extending into the parking lot. The roof largely consists of a flat or low-sloped roof with several protruding roof sections with understory windows. These sections have a steeper, gable design and consist of dimensional asphalt shingles.

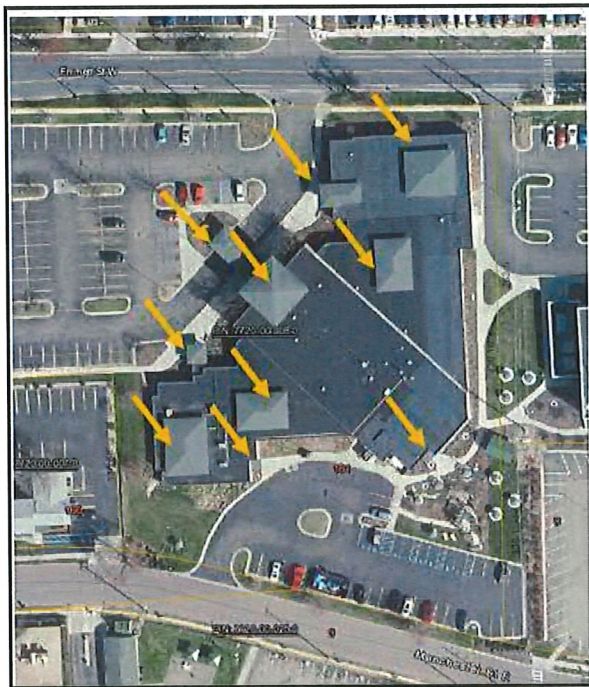


Figure 2. Arrows point to ten roof sections that will be replaced with metal sheets under the subject proposal. Aerial photograph provided by City of Battle Creek, dated April 2020 (approx.).

Project Description

Since the proposed roof will consist of a different material and design than the existing roofing material, the applicant filed the subject HDC Certificate of Appropriateness (No. H-13-21). The subject request only affects the portions that consist of asphalt shingles (Figure 2). These areas are at the front and back entrances and the higher roof lines. According to the applicant, the existing shingled roofing material will be removed and replaced with a new underlayment and then new metal sheets as the outer layer. The chosen metal sheet product is a Meridian Snap Together Metal Roofing produced in 12" to 16" wide sections between the snap in ribs. An example image of the metal sheet design is attached. Also, details of this material can be found at their following website: <https://www.mcelroymetal.com/standing-seam-metal-roofing-systems/meridian>.

Analysis

Due to the location and design of the proposed metal roofing sheets, staff finds that the new roof sections may result in a prominent appearance of the overall building, which triggered the filing of the subject HDC Certificate of Appropriateness. As mentioned earlier, the building was built in 1994 and generally consists of a contemporary design and construction material. As a result of the relatively young age of the building compared to historic buildings in the area, the subject building is considered a non-contributing resource in the historic district. Further, the roof sections under consideration for replacement also consists of a contemporary design and material (dimensional asphalt shingle). As a result, staff does not find the existing roof consisting of historic significance.

Applicable HDC Guidelines and Analysis for a Certificate of Appropriateness to install new portions of a roof at 181 W. Emmett Street.

This property is reviewed in accordance with City of Battle Creek Building and Housing Code Chapter 1470 "Historic Preservation", as amended, the Michigan's Local Historic Districts Act, as amended, and the criteria for the National Register of Historic Places as outlined in the Secretary of the Interior's Standards and Guidelines.

Specifically, the Commission shall follow Section 1470.09 *Review of Applications*, as follows:

- (b) *The Commission shall also consider all of the following:*
- (1) *The historic or architectural value and significance of the resource and its relationship to the historic value of the surrounding area.*
 - (2) *The relationship of any architectural features of the resource to the rest of the resource and the surrounding area.*
 - (3) *The general compatibility of the design, arrangement, texture, and materials proposed to be used.*
 - (4) *Other factors, such as aesthetic value that the Commission finds relevant.*
- (c) *The Historic District Commission shall review and act upon only exterior features of a resource and shall not review and act upon interior arrangements...*

And

1470.17 PRESERVATION OF HISTORIC FEATURES.

- (a) *Every reasonable effort shall be made to provide a compatible use for a resource which requires minimal alteration of the building, structure or site and its environment, or to use the resource for its originally intended purpose.*

Staff finds that the project will not result in any substantial alteration of the building or site.

- (b) *The distinguishing original qualities or character of a resource and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features shall be avoided when possible.*

As stated earlier, the roof of the subject building consists of contemporary material and design. The proposed metal roof material will not destroy the original qualities or character of the building. Staff is not aware of any historic material or architectural features existing on the subject site.

- (c) *All resources shall be recognized as products of their own time. Alterations that have no historic basis and which seek to create an earlier appearance shall be discouraged.*

The project will not create alterations resulting in an earlier appearance.

- (d) *Changes which may have taken place in the course of time are evidence of the history and development of a resource and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.*

This criteria is not relevant to the project because no changes to the exterior have taken place which may have acquired significance in their own right.

- (e) *Distinctive stylistic features or examples of skilled craftsmanship which characterize a resource shall be treated with sensitivity.*

As stated earlier, the roof of the building consists of a contemporary design and material. Staff does not find the roof to have distinctive stylistic features or specific skilled craftsmanship. Therefore, this criteria is not relevant to the project.

- (f) *Deteriorated architectural features shall be repaired rather than replaced wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other resources.*

This criteria is not relevant because the proposal does not entail any repairs or replacements.

- (g) *The surface cleaning of resources shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic materials shall not be undertaken.*

Intensive cleaning application such as sand blasting will not be necessary for the project.

- (h) *Every reasonable effort shall be made to protect and preserve archaeological resources affected by or adjacent to any project.*

This criteria primarily applies to projects involving ground work. No ground work is proposed under the subject project.

- (i) *Contemporary design for alterations and additions to existing resources shall not be discouraged when such alterations and additions do not destroy significant historic, architectural or cultural material and when such design is compatible with the size, scale, color, material and character of the property, neighborhood or environment.*

This criteria is not relevant to the project since it does not entail any alterations or additions to the site.

- (j) *Whenever possible, new additions or alterations to resources shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the resource would not be unimpaired.*

The proposed roofing material is metal sheets which are expected to be installed through the use of screws and, therefore, can be removed without changing the essential form or integrity of the building.

Recommendation

The property owner wishes to replace the aging asphalt roof with new metal roofing at various sections of the subject building. Based on staff's analysis of the application and site conditions, the proposal does comply with all standards outlined in Chapter 1470 *Historic Preservation* and should be approved. As contained herein, staff finds that the Commission does not find any conflict with Chapter 1470 *Historic Preservation*, the Michigan Local Historic Districts Act, or the Secretary of the Interior's Standards and Guidelines.

Therefore, planning staff recommends approval of a Certificate of Appropriateness for various new roof sections at 181 W. Emmett Street, as the request meets the standards outlined in Chapter 1470.09 "Review of Applications", Chapter 1470.17 "Preservation of Historic Features" and the Secretary of the Interior's Standards and Guidelines, as outlined in the staff report.



City of Battle Creek

Department of Planning and Community Development
10 N. Division Street, Ste. 117 • Battle Creek, Michigan 49014
Phone: (269) 966-3320 • www.battlecreekmi.gov

HISTORIC DISTRICT COMMISSION

Application for (check all that applies)

- ☐ Certificate of Appropriateness (for repairs or rehab projects)
☐ Notice to Proceed (for demolition requests)

Petition No. _____

Date Received: _____

APPLICANT**

NAME: X-TREAM ROOFING LLC
ADDRESS: 371 UPTON AVE BATTLE CREEK MI 49057
PHONE: 269-963-9484 FAX: _____
EMAIL: office@x-treamroofingllc.com

OWNER (if different from applicant)

NAME: GRACE HEALTH
ADDRESS: 181 EMMETT ST N. BATTLE CREEK MI 49037
PHONE: _____ FAX: _____
EMAIL: _____

**If the applicant is not the property owner, a letter signed by the owner agreeing to the application to the Historic District Commission must be included with the application.

SUBMITTAL REQUIREMENTS/EXISTING CONDITIONS

Address(es) of property for which the request is being sought: 181 EMMETT ST N. B.C.

Current use of the property: HEALTH FACILITY

List existing structures on the property and the approximate age of each. ASPHALT DIMENSIONAL SHINGLES. APPROX. AGE 23 YRS. OLD

Please list all activities/proposed work for the property area and how the proposed work relates to the building as a whole.

REPLACE SHINGLE SECTIONS OF THE ROOF WITH STANDING SEAM METAL

Indicate in which manner the proposed work will result in changes to the size and/or appearance of the features outlined in this application.

COSMETIC LOOK OF PROPOSED AREAS

Does the work proposed include maintenance/repair of existing features of the structure, or will it create new features that do not currently exist?

JUST EXISTING AREAS

Please indicate the existing building materials of the following structural features and the proposed materials if that feature is included as part of the application.

	Existing Materials	Proposed Materials (if applicable)
Roof	<u>ASPHALT SHINGLES</u>	<u>26 gauge Metal STANDING SEAM</u>
Windows	<u>N/A</u>	<u>N/A</u>
Siding	<u>N/A</u>	<u>N/A</u>
Foundation	<u>N/A</u>	<u>N/A</u>
Other _____	<u>N/A</u>	<u>N/A</u>

For Notice To Proceed requests only:

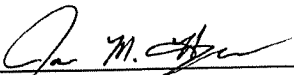
What options have you explored for the repair or relocation of the structure proposed for demolition?

SUBMITTAL REQUIREMENTS

As outlined in "HDC, Information and Procedure", each request requires supplementary items that thoroughly describe the existing structure and proposed project. These items are to be submitted with the completed application; incomplete applications will not be forwarded to the Historic District Commission.

APPLICANT SIGNATURE

By signing this application, the applicant hereby declares that all answers given herein are true to the best of their knowledge, and confirms that all information required for Historic District Commission review has been submitted. Furthermore, the applicant confirms that they have thoroughly read the "Historic District Commission, Information and Procedures" and agrees to comply with all requirements and procedures outlined therein.

 OWNER
Name JASON M. HARNER

7-16-2021
Date


HDC Grace Health

jason <jason@x-treamroofingllc.com>

Mon 7/19/2021 7:08 AM

To: Eric S. Feldt <esfeldt@battlecreekmi.gov>

Cc: Office <office@x-treamroofingllc.com>; Keith Crum <Keith.Crum@gracehealthmi.org>

 1 attachments (3 MB)

HDC Grace Health 18 W Emmett St.pdf;

Email sent from outside of the City of Battle Creek. Use caution before clicking links/attachments.
<https://www.mcelroymetal.com/standing-seam-metal-roofing-systems/meridian>

Meridian Snap Together Standing Seam Roofing | McElroy Metal

Meridian Snap Together Metal Roofing Meridian has it all! An aesthetically pleasing, snap-together, standing seam roof panel that is economical and easy to install. With no need for clips, Meridian panels are simply attached to the roof deck with pancake head fasteners.

www.mcelroymetal.com

Good morning,

I have attached the HDC for the roof project at Grace Health for the Shingle Areas on the Building. I have also attached the link for the manufacture and Metal Grace would like to use.

If you have any questions, please feel free to give me a call.

Thank You

Jason Harner / Owner

269-963-9484 Office

269-979-7884 Warehouse

269-317-1951 Cell

www.x-treamroofingllc.com

www.snowplowingbattlecreek.com

www.x-treamtreeremoval.com


Meridian Snap Together Stand...

mcclroymetal.com/standing-seam-metal-roofing-systems/meridian

AppsKalamazoo County...Battle Creek, Mich...DPW Mobile Utilite...Imported From IE (1)GIS Maps PageWO #78100 Site Pla...Battle Creek, MI LewisPlanning LayersNovusAGENDA

Search

Contact UsFind a Contractor/DistributorAbout UsFind a Location



Substrates and Coatings ▾Products ▾Building Type ▾Resources ▾Product Information ▾


Meridian Snap Together Metal Roofing

Click image to enlarge


Meridian has it all! An aesthetically pleasing, snap-together, standing seam roof panel that is **economical and easy to install**. With no need for clips, Meridian panels are simply attached to the roof deck with pancake head fasteners. Equally well-suited for commercial and residential applications, Meridian is always an excellent choice!

[View an installation animation](#)


[VIEW RELATED FILES](#)




Great for




Warehouses



Roofs



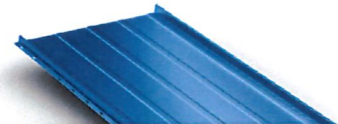
Residential



Commercial


Renderings

Click image to enlarge



Profiles

Click image to enlarge





Battle Creek Historic District Commission

Staff Report

68-70 Frelinghuysen

Meeting: August 9, 2021

To: Historic District Commission

From: Lynee Wells, AICP Interim Planner

Date: August 5, 2021

Subject: Request by the Calhoun County Land Bank Authority for a Notice to Proceed to demolish porch at 68-70 Frelinghuysen, a duplex building which received HDC approval for a Certificate of Appropriateness on July 9, 2019

Summary

Staff recommends the approval of the subject Notice to Proceed for both properties as the applications meets Chapter 1470.09(e) "Review of Applications."

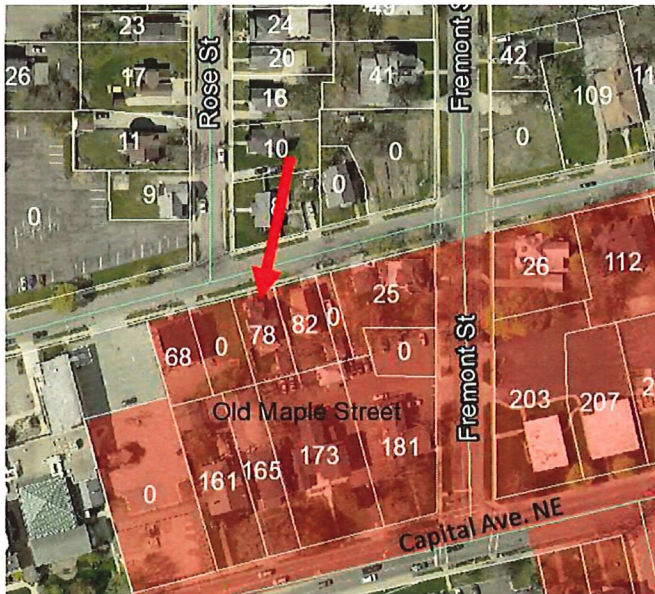


Figure 1: Arrow points to subject site along Frelinghuysen Ave. nearby Rose Street in the Old Maple Street local Historic district.

Site & History

The subject building (68/70 Frelinghuysen Avenue) is located in the Old Maple Street local historic district just east of downtown Battle Creek. According the City of Battle Creek Assessor's database, the building was constructed in 1910 as a duplex with a total area of 3,872 square foot. The building was occupied and used as a rental in the early 2000s, according to staff's records. Sometime in 2007, the property became foreclosed and vacant. Building and property maintenance stopped. Unlawful access became an issue. The City of Battle Creek required the owner to board entrances and secure the building to prevent further unlawful access. In 2008, the property transferred from a bank to a private entity who owned it until 2017. During that time, the new owner tried to re-occupy the duplex as a rental but did not address all building maintenance issues in order to bring the building into compliance for re-occupation. Some exterior work was done without HDC approval or other permits, including new vinyl siding over existing historic wood siding; replacing certain windows using vinyl material and other modern elements; replacing large front porch steps with smaller steps, replacing one of two front doors with substantial different style, and minor changes.

The deferred building and property maintenance continued to be an issue. The property was again foreclosed sometime in 2017 and the Calhoun County Land Bank took ownership. The building continues to be unoccupied and maintenance issues have increased. The doors continue to be boarded to prevent unlawful access and the porch is taped off to prevent access.

In 2019, the Land Bank received Certificate of Appropriateness from the HDC to complete the following:

- Windows: Replace with painted wood, double-hung window with modern energy-efficient material and glass.
- Doors: Replace all exterior doors with wood doors to match or similar in design existing door style.
- Siding: Replace existing vinyl siding with 3" vinyl clapboard that will be similar to original 3" wood clapboard
- Porch: Front porch will be replaced with new design matching historic style and features, but use taller hand railing to meet current safety standards (36") instead of previous 24". Side porch will be repaired and match original style and features.

No work has been conducted since the approval was granted. Most recently, due to continued deterioration and heavy rains this summer, the porch has fallen and requires immediate attention to preserve the integrity of the remainder of the building.

Note that the HDC approved "replacing" the porch in 2019, and that approval would remain authorized should the property transfer ownership. Per conversations with the Land Bank, this request for Notice to Proceed assumes that the porch would not be replaced until the property is sold and a new owner carries out the work, which would be a requirement they would include in any purchase agreement.

Summary of Request

The applicant (owner) filed a Notice to Proceed to demolish the front porch due to irreparable damage caused by heavy rains and work by previous owners that damaged its structural integrity. The condition of the porch is a safety hazard. The applicant intends to stabilize the façade and protect the gaps in siding from the elements once the porch is removed. The applicant cites financial constraints to carry out the full building rehabilitation (in excess of \$300,000) as well as porch rehabilitation (in excess of \$40,000). Included in the materials provided are costs estimates from Old School Construction.

Project Description

A work scope and cost estimates are provided. The work includes the following:

- 1) Remove and dispose of the entire porch roof including trusses, shingles and all supports.
- 2) Remove and dispose of the entire porch floor, framing, supports and unstable or non-reusable foundations/footings.
- 3) Keep the existing field stone for the foundation repair at the site.
- 4) Secure and protect natural gas meter which will be left as undisturbed as possible. Effort to work around this meter will be taken.
- 5) Remove any ivy runs found attached to the building that are exposed in this process.
- 6) Installation of a temporary solid barrier and/or weatherization to re-establish a water tight shell in the areas affected by the removal of the porch and roof. This barrier will help maintain the integrity of the building.

Applicable HDC Guidelines and Analysis for a Notice to Proceed.

This property is reviewed in accordance with City of Battle Creek Building and Housing Code Chapter 1470 "Historic Preservation", as amended, the Michigan's Local Historic Districts Act, as amended, and the criteria for the National Register of Historic Places as outlined in the Secretary of the Interior's Standards and Guidelines.

Generally, demolition of a structure will not comply with the standards outlined in the Secretary of Interior's Standards and Guidelines. A demolition by not correcting building code and general building maintenance is likely considered a 'demolition by neglect.' See this term below.

1470.11 DEMOLITION BY NEGLECT

Upon a finding by the Historic District Commission that an historic resource within an Building Inspection Department Historic District or proposed Historic District is threatened with demolition by neglect, the Commission may require the owner of the resource to repair all conditions contributing to demolition by neglect. If the owner does not make repairs within a reasonable time, the Commission or its agents may enter the property and make such repairs as are necessary to prevent demolition by neglect. The cost of the work shall be charged to the owner and may be levied by the City as a

special assessment against the property. The commission or its agents may enter the property for purposes of this section upon obtaining an order from the Circuit Court.

If this type of demolition causation is determined, the City may take corrective action (building renovation) themselves if the owner cannot or is unwilling. Today's application to demolish a feature of the building would satisfy the outstanding building code violations. At this time, the City is not likely going to make the repairs themselves.

If the standards outlined in the Secretary of Interior's Standards and Guidelines cannot be met, the State Act and local ordinance (Ch 1470.09(e)) states that a notice to proceed **shall** be issued if any **one** of the following criteria is met:

(e) ***Work within a Historic District shall be permitted through the issuance of a notice to proceed by the Commission if any of the following conditions prevail and if the proposed work can be demonstrated by a finding of the Historic District Commission to be necessary to substantially improve or correct any of the following conditions:***

(1) ***The resource constitutes a hazard to the safety of the public or to the structures and occupants.***

Structural instability has resulted from previous repairs that damaged the supports, floor and footings. Recent heavy rain events have also contributed to the rotting of the wood and added weight to the porch roof which cannot be supported by the damaged supports. This issue could worsen and affect the house, especially during winter months. Therefore, removing the porch to not compromise the remaining portions of the structure would improve the current safety hazard.

This criterion is met.

(2) ***The resource is a deterrent to a major improvement program that will be of substantial benefit to the community, and the applicant proposing the work has obtained all necessary planning and zoning approvals and financing and environmental clearances.***

As of staff's records, the building is not a deterrent to a major improvement program.

This criterion is not met.

(3) ***Retaining the resource will cause undue financial hardship to the owner when a governmental action, an act of God or other event beyond the owner's control created the hardship, and all feasible alternatives to eliminate the financial hardship, which may include offering the resource for sale at its fair market value or moving the resource to a vacant site***

within the Historic District, have been attempted and exhausted by the owner.

Retaining the porch will result in additional future expense to the owner due to the existing poor condition. The porch is beyond saving due to rotting wood supports and structural base. The 2019 Certificate of Appropriateness allows for replacement of the porch. The applicant will place the building for sale and any sale will require compliance with the standards and approvals included in that 2019 approval from the HDC. Per conversations with the applicant, replacement of the porch will be an aspect of any future rehabilitation.

This criterion is met.

- (4) ***Retaining the resource is not in the interests of the majority of the community.***

Retaining the porch in the current condition is a safety hazard, and the property owner has received complaints from neighbors regarding its condition.

This criterion is met.

Criteria (e)(1) and (3) are met.

Analysis and Recommendation for Notice to Proceed

The owner submitted an application for a Notice to Proceed to demolish the front porch at 68-70 Frelinghuysen. Staff found Criterion (e)(1), (3) and (4) are met.

Planning staff is recommending that a Notice to Proceed be issued to the applicant for the demolition of the front porch structure at 68-70 Frelinghuysen if the Commission is satisfied that the Applicant can meet at least one of the criteria outlined in Chapter 1470.09(e) "Review of Applications". According to City's records, the building has been neglected and unmaintained for a number of years and retaining this element of the building at this time will cause undue financial hardship to the owner.

Staff's Recommended Conditions

1. The gentlest means possible should be used when removing the front porch and repairing and installing weather proofing to the building.
2. The applicant shall take measurements of the porch, including its height, depth, and length, as well as measurements of the remaining supports and provide a detailed record to the City for the file and provide the same record to the future owner for use with reconstruction.
3. The foundation shall remain and stated in the applicant's scope of work.

4. The applicant shall contact the City of Battle Creek if any archaeological resources are discovered.

Pictures taken by staff on May 7, 2019





City of Battle Creek

Department of Planning and Community Development
10 N. Division Street, Ste. 117 • Battle Creek, Michigan 49014
Phone: (269) 966-3320 • www.battlecreekmi.gov



HISTORIC DISTRICT COMMISSION

Application for:

- ☐ Certificate of Appropriateness (for repairs or rehab projects)
☒ Notice to Proceed (for demolition requests)
☐ Minor Class of Work (admin approval)

Sept 13, 2021 Mtg.

Petition No. H-1521

Date Received: _____

APPLICANT**

NAME: Calhoun County Land Bank Authority (CCLBA)
ADDRESS: 315 Green St W, Marshall, MI
PHONE: 269-781-0777 FAX: 269-781-0800
EMAIL: arobinson@calhouncountymi.gov or kedwards@calhouncountymi.gov

OWNER (if different from applicant)

NAME: Same as above
ADDRESS: _____
PHONE: _____ FAX: _____
EMAIL: _____

****If the applicant is not the property owner, a letter signed by the owner agreeing to the application to the Historic District Commission must be included with the application.**

SUBMITTAL REQUIREMENTS/EXISTING CONDITIONS

Address(es) of property for which the request is being sought: 68/70 Frelinghuysen

Current use of the property: Vacant yet preparing for the real estate market.

List existing structures on the property and the approximate age of each. _____

The primary structure on the property is an original duplex with 3 bedrooms on each side built in 1910.

There are no accessory structures on the property.

Please list all activities/proposed work for the property area and how the proposed work relates to the building as a whole.

CCLBA is request to demolish the entire porch structure. The porch support collapsed on 6/15/2021. When inspected, it was found that the roof was supported by a support and 2 4"x4" posts. The floor is damaged from the roof leaking and is supported by two support and a 2"x4" support - it is very dangerous structure in its current state.

Indicate in which manner the proposed work will result in changes to the size and/or appearance of the features outlined in this application.

The work will be complete by a contractor that has expertise in the historic preservation that will be taking into consideration the need for the historic reconstruction plans.

Does the work proposed include maintenance/repair of existing features of the structure, or will it create new features that do not currently exist?

It will create a flat surface for the next phase of porch reconstruction to commence.

Please indicate the existing building materials of the following structural features and the proposed materials if that feature is included as part of the application.

	Existing Materials	Proposed Materials (if applicable)
Roof	<hr/>	<hr/>
Windows	<hr/>	<hr/>
Siding	<hr/>	<hr/>
Foundation	<hr/>	<hr/>
Other <hr/>	<hr/>	<hr/>

For Notice To Proceed requests only:

What options have you explored for the repair or relocation of the structure proposed for demolition?

The porch collapse was unexpected and has presented a dangerous situation at the site and must be removed.

SUBMITTAL REQUIREMENTS

As outlined in "HDC, Information and Procedure", each request requires supplementary items that thoroughly describe the existing structure and proposed project. These items are to be submitted with the completed application; incomplete applications will not be forwarded to the Historic District Commission.

APPLICANT SIGNATURE

By signing this application, the applicant hereby declares that all answers given herein are true to the best of their knowledge, and confirms that all information required for Historic District Commission review has been submitted. Furthermore, the applicant confirms that they have thoroughly read the "Historic District Commission, Information and Procedures" and agrees to comply with all requirements and procedures outlined therein.

Amy Rose Robinson

Name

7.29.2021

Date

Old School Construction

3045 W. AB AVE
Plainwell, MI 49080
269-779-4188
ID No. 2101176735

Proposal
July 9, 2021

Client: Calhoun County Land Bank
315 W Green St,
Marshall MI 49068
c/o: Amy Rose Robinson
Property & Project Coordinator
269.781.0744ph 269.781.0800fx

RE: 68/70 Frelinghuysen - Porch Demolition

Scope of Work:

Careful demolition of the entire porch structure: Including:

- 1) Remove and dispose of the entire porch roof including trusses, shingles and all supports.
- 2) Remove and dispose of the entire porch floor, framing, supports and unstable or non-reusable foundations/footings.
- 3) Keep the existing field stone for the foundation repair at the site.
- 4) Secure and protect natural gas meter which will be left as undisturbed as possible. Effort to work around this meter will be taken.
- 5) Remove any ivy runs found attached to the building that are exposed in this process.
- 6) Installation of a temporary solid barrier and/or weatherization to re-establish a water tight shell in the areas effected by the removal of the porch and roof. This barrier will help maintain the integrity of the building.

(Note has been made that this home is in a City of Battle Creek Historic District and that permits for this work will be obtained by CCLB prior to project initiation. Also, that work should proceed under the assumption that a future Owner will reconstruct the porch and roof. All effort should be made to preserve their ability to do so.)

Total Proposed Cost: \$7,000.00

2: Exclusions:

Price does not include cost of moving or removing concrete front entry steps.

Payment Schedule:

Down Payment =	\$3,500.00	(Project Initiation)
Final Payment =	\$3,500.00	(At Completion)

TOTAL LABOR & MATERIALS	\$7,000.00
------------------------------------	-------------------

Andy Davis, CEO/Craftsman

We Appreciate Your Business!

Photos taken 6/23/2021 with CCLBA Property & Project Coordinator, Amy Rose Robinson and Andy Davis, owner of Old School Construction – After collapse complaint on 6/15/2021



